



SEQUENCE LISTING

<110> Thomae, Bianca A.
Wieben, Eric D.
Weinshilboum, Richard M.
Wood, Thomas C.

<120> Arsenic Methyltransferase Sequence
Variants

<130> 07039-454001

<140> US 10/824,828

<141> 2004-04-15

<150> US 60/463,114

<151> 2003-04-15

<160> 36

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 34500

<212> DNA

<213> Homo Sapiens

<400> 1

| | | | | | | |
|------------|------------|------------|------------|-------------|-------------|------|
| aagggtagg | gagaaaattt | ctatgtatgt | tagtttttta | tcttaaaaaa | attagctttt | 60 |
| gtgaggctg | gcgtggtgg | tcacgcctgt | aatcccagca | ctttgggagg | ccgaggcggg | 120 |
| cagatcacga | ggtctggaga | ttgagaccgt | cctgggcta | acagtgaac | cccgtctcta | 180 |
| ctaaaaata | aaaaaattag | ctgggcgtgg | tggcgggcgc | ctgtagtccc | agctattcgg | 240 |
| gagggtgagg | agtagaatgg | catgaacccg | ggaggcggag | cttgcaagtga | gctgagatcc | 300 |
| tgccactgca | ctccagcctg | ggtgacagag | cgagactctg | tctcaaaaaa | ataaaaaagc | 360 |
| ttttgccaat | atttaaaata | tgacttgatg | tgagagtctt | aatttcttct | acgcagtata | 420 |
| cagatatata | gcattcctgt | catttagcag | gggtgatagt | aaaacaaaaa | aacaaaaaac | 480 |
| cccacaaaac | ctgtggtgag | gcactgacca | atcagaatga | ttgatgggtca | cagtctgggtc | 540 |
| caaaattagc | ccccacacca | gacaccatgg | aggaaaagtg | agagtaactc | aatttaagtt | 600 |
| gacagtgggt | tgttttattg | cagtttatct | gtgtgtgaat | aggtagattt | aaggattggt | 660 |
| ggccagggtg | ggtggctcac | acctggaatc | ccagcacttt | taggaggcag | aggcaggcgg | 720 |
| atcacttgag | atcaggaggt | cgagacagcc | tggccaacat | ggtgaaaccc | tgtctctact | 780 |
| aaaaatacaa | attagccagg | catggtagtg | catgcctgta | attccagcta | cttgggaggc | 840 |
| tgaggcagga | gaatcgcttg | aaccggggag | gcagagggtg | cagtgaagccg | agattgcgcc | 900 |
| attgcgctcc | agcttgggca | acaagagcga | aactctgtct | caaaaaaaaaa | aaaaaaaaaa | 960 |
| aaggattgtc | aatgattctt | tgttaagtaa | ccataaatta | aagataacaa | aacaagcaca | 1020 |
| agagaaaaat | gatacagccc | tttccttgac | ctctcactaa | tctgcccttt | taagataaag | 1080 |
| atatcatttt | aactatgaga | aggtaactgc | ttttctaaag | gagctcattt | tatgaagata | 1140 |
| atattttgaa | aactaatatt | taggagtgtt | ttcaccattc | tatgattgcc | caaaaactaa | 1200 |
| gtgatactta | taaaaacact | aagttttata | catatactag | ttggaaatat | tccaagctgt | 1260 |
| agaaatatcc | caacaaggat | tatttccatg | gggttaattt | gttaaaaaata | taaaagacac | 1320 |
| cacctttcta | ttaatttgta | acaactaatt | gacatcagag | aagatgaaaa | tttactagct | 1380 |
| ggatatcaac | cagatttttg | tattattggc | aactgagatt | gaaaaatgaa | tgaaagagtc | 1440 |
| tacttcatcc | atttagatat | cctttcactt | ggatctccct | gtttccttac | tgtcctaattg | 1500 |
| aatagaaatg | atcgttacaa | gctgggcatg | gtggcttgca | cctgtagtcc | cagctactgg | 1560 |
| ggaggctgag | gagggaggat | ggcttgaggc | cagagttgaa | ggatccagag | atgattgcgc | 1620 |
| agtgacgcta | agcttggggc | acagagttga | gacctgtctt | ctaaaaattt | ttttttaatt | 1680 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| taaattataa | aaagagaaat | gcttgtttaca | accacaaagg | gaaacaagat | atacacatat | 1740 |
| aattgtggaa | gtaaaaataa | ataattttaa | aatacttttg | ggtgctcgct | tcggcagcac | 1800 |
| atatagttgg | aatgatagag | aagatttgca | tggccctgc | gcaagatgac | atacaaattc | 1860 |
| gtgaagtgtt | ccatatttaa | aaaaacaaaa | aatacttttg | ggcctggcac | tgtggctcat | 1920 |
| gcctgtaatc | caaacacttt | gggaggctga | ggcgggcgga | ttgcttgaac | ccaggagttg | 1980 |
| gagaccagcc | tggacaacat | ggtgaaatcc | cgtctctata | aaaaaatata | aaaattaacc | 2040 |
| aggtgtggtg | gtgcacgcct | gtaatccaag | gtacttggga | ggctgaggcg | ggaggatcgc | 2100 |
| ttgagccagg | aggttggggc | tgggtaacag | agaccgtctc | aaaaaaattt | aaaaattaaa | 2160 |
| aaaaaaactt | tctgcaagat | gaagtgacaa | tacctggaaa | atacatgtga | cttgaccaaa | 2220 |
| aattactata | ggtgaaaata | aatttagcaa | agttgctttc | ctaaatacaa | cccaaaatag | 2280 |
| actggaaca | gctacatact | gttaatggtt | ccctctatgt | gacattctag | aaaaggcaga | 2340 |
| actataggga | gggaaaacat | ctgtggttgc | ccaggagcta | ggggtgggaa | gagggaattt | 2400 |
| actacaaaga | ggcacgaaga | aacttgtggg | ccagagctat | tttggctctc | gttttgggtga | 2460 |
| tgtatatacg | tttgccagag | ttcacagaac | tgcacactga | agaaagatgg | atttcacgga | 2520 |
| atgtgaatta | tatctcaaca | aacttgactt | caaaaaacag | atcgagaaaa | gatgattcta | 2580 |
| ttcccaaaaa | gggggagggg | ggaagatcat | tatatagggtg | agtgttcatt | taaatcagag | 2640 |
| tacgagattt | atccgtgaaa | atcgcagtg | agcgaacaag | ggggatgctg | ataccgacct | 2700 |
| cctggttgg | aagcctgtag | agcagcgcgg | atgacagtg | aacagcgggt | caggcgggtg | 2760 |
| gcgcctgagc | gaggggctag | agcgggatgg | gcgggcggag | caagcctgcc | agcctgggcg | 2820 |
| gggcctcggc | acaggagctg | gctgcgggag | cccgcgctcc | tgagtgcgag | gccgaggaga | 2880 |
| cagtgaagtgc | gcgccttgag | tgcaggccg | aggagacagt | gagtgcgcgc | cctgagtcgc | 2940 |
| aggccgagga | gacagtga | gcgcgcctg | ggcgcgccgc | cccagccccc | agcccccttc | 3000 |
| ctgggcccc | gcaaggcggg | aacgcgagcg | cctccccga | gctgtgtctc | gagacctttg | 3060 |
| tcctccctc | accctcggc | ccgtgcctg | ccctttactg | gccccctccc | tcctgcccgt | 3120 |
| ccctcagcac | cctctccttt | caactaactt | tcccgctccc | gacagtggct | gcacttcgtg | 3180 |
| acgctgagat | acagaaggac | gtgcagggtga | gagctgtagg | gcctggaatg | gcccgaagtgg | 3240 |
| agcctaggct | aatggaagtc | tggcctggcc | cgcaccctgt | cccccgggac | tcctggagtc | 3300 |
| ggggtagggc | aggggtctagg | cttcgacctt | tccagggaac | tgaggtcggc | caagtggagg | 3360 |
| tggaggtggt | gacggagccc | tcgcgctgca | gtcacagctc | ttctccctct | ctacccctca | 3420 |
| ctccactgtg | ggacgctggg | tcagacctac | tacgggcagg | tgctgaagag | atcggcagac | 3480 |
| ctccagacca | acggctgtgt | caccacagcc | aggccggtcc | ccaagcacat | ccgggaagcc | 3540 |
| ttgcaaaatg | tacacgaaga | agtagcccta | aggtagagtg | ccctgtgctg | tccccaggaa | 3600 |
| gaccccaaac | agcagttttc | ccaaaagata | atgatgcagg | tcactaggga | attaaccctg | 3660 |
| agccaccaac | ccatcagctt | gccttgtcta | ttgtaaaaat | cctaaatctc | agcaccctac | 3720 |
| atcttactgc | tctaagaacc | tccgatgagt | ctgggcgcgc | cagtgaacct | gtagtcccaa | 3780 |
| gtgcttggga | ggctgaggca | gaggatcgcg | tgagcccaga | agttacaggc | tgtagtgtgc | 3840 |
| gatccgggat | gtgaatagcc | actgcactcc | agcttgggtca | acatagccag | atgcatctct | 3900 |
| aaaataaatg | cgtactttta | aaaaattgcc | taaaaaaaag | aacctccagc | gtgaacactc | 3960 |
| tgtagtccct | acccatgtct | acagaataca | gtcacactca | ctggatctgc | cattcaagat | 4020 |
| atgcgcagtt | cagcaccac | taatcaacct | tggccctttt | gacccttccc | ttctcactc | 4080 |
| catcagcact | gcctgcccag | ccggcagtc | ccaatttgga | aggtcttccc | ttttcttttt | 4140 |
| ccttcccaac | cctgcgcac | cagcaccacg | ctgctgtccc | acctactgca | tggagccttc | 4200 |
| tctaactcct | gagcggcctc | ttccccaaac | tgccacagca | ctctgtcact | cggctctgtcc | 4260 |
| gtaaatcacg | ggaagtgttt | tctgtgcacg | atgtttttatc | tcgcctctca | aatacaccta | 4320 |
| cgcggcgggg | agcgggtggct | cacgtccgtc | atcccagaac | ttgggaggcc | aaggcaggta | 4380 |
| gatcacttga | ggtcagaagt | tcaagaccga | cctggtcaac | atagtgaaac | cctgtctcta | 4440 |
| ctgaaaatac | aaaaattagc | tgggtgtagt | ggggcacgcc | tgtagtccca | gctacttggg | 4500 |
| aggctgaggg | aggagaatca | cttgaacgtg | gaaggcggag | gtcgcagtga | gcggagattg | 4560 |
| tgccactgca | ctccagcctg | ggcaacagag | aaaaactcag | tcaaaacaaa | acaaaacaaa | 4620 |
| aaaaaggccg | ggggtggtgg | cttatgtctg | taatcccagc | actttgggag | gccgaggcgg | 4680 |
| gaggatcacg | aggccaggag | atcgagacca | tcctggctat | catggtgaaa | ccccgtctct | 4740 |
| actaaaaata | caaaaatatt | atccgggtgt | ggcggcacgc | gcctgtagtt | ccggctgctg | 4800 |
| gggagggtga | ggcaggagaa | cggcgtgaac | ccgggaggcg | gagcttgag | tgagctgagt | 4860 |
| tcgagccact | gcactccagc | ctgggtgaca | gggcaagact | ccgtctcaaa | aaaaaaaaaa | 4920 |
| aaaaaaaaaa | aaaaaaaaat | tagccaggag | tgggtggcagg | cgctcgtagt | cctagctact | 4980 |
| cgggaggctg | aggtaggaga | atggtgtcaa | cccgggaggc | ggagcttgcg | gtgagctgag | 5040 |
| atcgcgccac | tgcactccag | cctgggcgac | agagcgagac | tccgtctcaa | acaaaacaaa | 5100 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| acaaaacaaa | acaaaacaaa | tcaaaaacaaa | aaacgcctat | gggacagaaa | ccttacattt | 5160 |
| tttctcfaat | aactagcgca | gtcctgggccc | tgaattagaa | gctcagctaa | tgattaaatg | 5220 |
| tattttattca | acacattatt | ttatttttatt | tattttatttt | tgagacggag | tctcactctg | 5280 |
| tcccttaggc | tggagtgcag | tggcgccatc | tctgctcact | gcaacctctg | cctcctgggt | 5340 |
| tcaagccatt | ctcctgcctc | agcctcccga | ggagctggga | ttacaggtac | ctgctaccgt | 5400 |
| gcccagctga | ttttttggta | tttttagtag | agacaggggt | tcactatgtt | ggccaggctg | 5460 |
| gtctccaaact | ccttgcctca | agcgatccgc | ctgccttgac | ctcccaaagt | gctgtgatta | 5520 |
| taggcgtgag | ccaccgcgcc | cagcctgaac | acattatttt | agatggctta | tgaagtctta | 5580 |
| gtgcctagca | catgcccac | aatactgtgg | taaagcagat | acagtcccag | ccttcatggg | 5640 |
| tgtccagttc | agtggagact | aaacatcaga | agtatgagt | aatgatgcaa | gaaagaagga | 5700 |
| aggaaggaag | gaacggaggg | agggaggggag | gagggaagta | tgtataagat | ttagtgggtt | 5760 |
| catgtcttac | agtcctccagg | gaaaaaatat | gtgttttcca | ttcccgat | attatggctg | 5820 |
| tggctctggg | atccctgagc | atctagaaaa | ctgctgggatt | ttggatctgg | gtagtggag | 5880 |
| tggcagagat | tgctatgtac | ttagccagct | gggtgggtgaa | aaaggacacg | tgactgggaat | 5940 |
| agacatgacc | aaaggccagg | tgaggcatga | tttggagagac | aaggagaaaa | agattctcaa | 6000 |
| aagcattatt | tgaaaaaata | agttgttttc | ttcgtggctc | ttcaaggata | atttaagaaa | 6060 |
| gcttctagtt | agcaatgctc | atltgtgcca | ctagtgtctc | ctgtcttgga | aactgataac | 6120 |
| ttgaacaatt | aggggttctt | ctgggcgaac | acaagagtcg | gagggttgct | ctgatatgaa | 6180 |
| tatcgtgacg | atagagtggg | ctttgatctt | tccctctctg | ctgccatcta | tctgaaaga | 6240 |
| ttttgttatt | gaatgaggag | tttattcaag | ccaaactgca | cgggcagcag | ggagtttatg | 6300 |
| tcccaggttg | tagtatatcc | tacgtgtcca | caggaatctt | gtatgtttat | ccaaaataat | 6360 |
| ctaggggaag | tatattctgt | tagtgatagg | aaatttttag | gaaaaagttg | tgtatttttt | 6420 |
| tcaaatgtt | atcaaaacta | tatttttctt | actttagggtg | gaagtggctg | aaaagtatct | 6480 |
| tgactatcac | atggaaaaat | atggcttcca | ggcatctaata | gtgactttta | ttcatggcta | 6540 |
| cattgagaag | ttgggagagg | ctggaatcaa | gaatgagagc | catgatattg | ttgtgtaggt | 6600 |
| ctatattctt | actgttatga | ctatagccca | ttttctttat | tattattatt | attattattg | 6660 |
| agatggactc | tgcctctgtc | acccaggcca | gagtgcagtg | gcccattgtc | agctcacgat | 6720 |
| aacctctgcc | tcccgggttc | aactgattct | cttgcctcag | cctctcaagt | agctgggatt | 6780 |
| ataggcacac | gctaccacat | ccagctaatt | ttttaaatct | tcttttagta | gagacagggt | 6840 |
| ttcaccatgt | tggccaggct | ggctcacaac | tccctgatctc | aggtgatcca | cccgttcca | 6900 |
| cctcccaaag | tgtctgggatt | acaggtgtga | ggcactgtgc | tcagccctca | tttccctttg | 6960 |
| aacacagaga | tgtcactatt | actgtttgct | gaattgactc | tcatttaggg | tgttaaaacta | 7020 |
| aacttagcat | ggcttactaa | tgggagagag | ctgggttgag | ctgctggagc | tcaccagcag | 7080 |
| cagaacacac | cagaccaaga | gggaacttac | ttgaaactta | accacaaacc | aatgaaccca | 7140 |
| aaagaccagc | aggaccacta | agtttgctcc | tacaatacat | gctgacctgt | atctttcata | 7200 |
| atattttcat | ggtaaattat | aggattctat | ttcctttttt | ccctcaagtt | gttattgtca | 7260 |
| aatcatgccc | aagtgcacgc | tgcctttgag | gaacatagcc | tgtttacgtg | aagcataaga | 7320 |
| aatgccttgt | gccggccagg | tgcgggtggct | cacgcctata | atcccagcat | tttgggaggc | 7380 |
| cgaggcagg | ggatcacgag | gtcaggaatt | ccagaccagc | ttgaacaaca | tggcgaaacc | 7440 |
| ccgtctctac | taaaaatata | aaaattagct | gggtgtgggtg | gcacatgcct | gtaatcccag | 7500 |
| ctatttagga | ggctgaggca | ggagaatcac | ttgaaccogg | gaggcggagg | ttgcaatgag | 7560 |
| ccgagattgc | gccattgtac | tccagcctgg | gcaacaggag | tgaacatcc | tctcgggaaa | 7620 |
| aaaaaaaaaa | gaaagaaatg | ccttgtgcag | taggcactctg | gtctgagggt | tcatcttggt | 7680 |
| acatggtgaa | catcaggaca | gaaacaagta | agaatcatgc | ctgatgttat | tttctgcaca | 7740 |
| ttcaaaacttg | ctaacaattt | attgagattt | taagcactct | gtctctgatc | ttggggaaaa | 7800 |
| gcttagttga | aggcattaga | aagagaggag | ggaggcggta | agaatgggg | agctttgaca | 7860 |
| gaacggtggg | aaccaccttt | agggctctgaa | aggatttgca | gatctctgag | tgttgatgag | 7920 |
| atttgctcga | catttcatct | gttctctttt | agatcaaaact | gtgttattaa | ccttgtgcct | 7980 |
| gataaacaac | aagtgcctca | ggaggcatat | cgggtgctga | aggtgaggag | gagagtga | 8040 |
| taaattatct | tgaacatca | gtaagagctg | atgggttaag | tcttggttg | tcccccttga | 8100 |
| actaagagct | caaactctct | taatttatcc | attaaatgaa | taaggggtgg | caaaaggggg | 8160 |
| aaggggcagg | aataccccgg | atatggatta | ctttccctct | taggttgcaa | aaggtagtaa | 8220 |
| atccgagggtg | acagttgtca | ctgaatgtgt | taaggatttt | gctttcttga | ctgtctctcc | 8280 |
| tatttgctgc | tgtacatgat | cctagaagag | catctgtgga | gctataggaa | tctttgcaact | 8340 |
| gactactaat | gattgctttg | aatatactct | cttctagcat | gtacagtgtt | tctcagggt | 8400 |
| tctgatttct | tatctgtcat | gatttcagat | ctttgggaag | ttacagaaga | tggaaactttt | 8460 |
| acattaacta | cttgctaaaa | ggaaagcttg | caggagctcc | acagccttca | ttgtatcatg | 8520 |

| | | | | | | |
|------------|-------------|------------|-------------|-------------|-------------|-------|
| agatgtgtat | cttcatgata | gtagatgaaa | tattcagcca | ggtgcggtag | ctcacacctg | 8580 |
| taatcccagt | gctgtgggag | gccgaggcgg | gcagatcacc | tgagggtcagg | agtttgagac | 8640 |
| cagcttgggc | aacatggaga | aactctgtct | ctactaaaaa | tacaaaaatt | agctgggtgt | 8700 |
| ggtggtgcgt | gcctgtaatc | ccagctcctc | gggaggctga | ggtaggagaa | tagcttgaac | 8760 |
| ccagaagtca | gaggttgcag | tgagccagga | tcgtgccact | gcactccagc | ctgggagaca | 8820 |
| gagcgagact | ccatctcaaa | aaaaaaaaaa | aaaaaaaaag | attctagctg | ggtgggtggt | 8880 |
| acatgcctgt | actcccagct | acttggatgc | tgaggcaaga | ggattgcttg | agctctggag | 8940 |
| tttgtgtgca | gcttgggcaa | tatagtgtga | tactgcctc | taaaaaatg | tttttttttt | 9000 |
| tgagatggag | tctcactctg | ctgtccaggc | tgtagtgcag | tggcaggatt | tcatctcact | 9060 |
| gcaacctccg | cctcctgggt | tcaaacaatt | cttttgccctc | agcctcccta | gtagctggga | 9120 |
| ctacaggcgt | gtgccaccat | gccagctaa | tttttgtact | tttagtagag | acaagatttc | 9180 |
| accatattgg | tcaggctgat | cttgaactcc | tgatctcatg | atctgcctca | gcctcccaaa | 9240 |
| gtgctgggat | tacaggcatg | agccgctgtg | cctggccaaa | attttttttt | aaattgacaa | 9300 |
| cagatttttg | agattttttg | tttacaagc | tgtcatagaa | ctcaaataca | aatatctata | 9360 |
| tagaaatgat | ttaatgat | agtgatgtct | ttgttagtat | gtcattttac | acgccagttc | 9420 |
| actatctcca | ccaaaaatgt | acttataaaa | ggtagaaaca | ctattataga | atctagatct | 9480 |
| ccaggtttcc | agggtttttga | aattagctaa | ataaaatggt | aagttcctga | tactcatatt | 9540 |
| gccttacatt | ttaaggataa | tattttaaag | ataaaatgtg | ttgttataaa | agtaaataac | 9600 |
| aacattacaa | aaagttatat | tttttaatag | aaatggggtc | ttgctgtcac | ccaggctgga | 9660 |
| atgcagtgtc | actatctgta | ccccctaac | tctgagtta | gaggggtcca | gatagtgaca | 9720 |
| ctcactgtac | cctctaactc | ctgggctcaa | acaatcctct | tgagtagcta | ggactccagg | 9780 |
| cacatgccac | catgccacgc | tagtttttaa | atttctatat | gggagagagg | gtcttgctgt | 9840 |
| gttgccaaag | ctagtctcaa | actgctctcc | tccagcaagc | ctcccacttc | ggcctcctga | 9900 |
| gtcattggga | ttagaggcct | gagccatcat | acctggcaaa | gttatactat | tcttaagaga | 9960 |
| taaaagatta | tgaatactga | tgatatcctc | tgttctacaa | tgacctgggg | ctgcttttgg | 10020 |
| ttcagattgg | ctaaaaat | aatgtaagt | aacctgaaaa | tctttattta | ggagacagac | 10080 |
| actcttagaa | tgtgat | ttacctgtt | gataagccac | tgggaggaaa | aaaaaccttg | 10140 |
| gcacttgact | attgat | actaaagagg | cagctgctat | ttgttcacaa | agggtcagct | 10200 |
| taaacattgc | tattgat | taaatttgat | ttgttcccc | tattcctttc | ttgttatgt | 10260 |
| ggggtcaatg | taatcattaa | tcatcttggt | tggactaata | tgctctgtt | tcagcatggt | 10320 |
| ggggagttaa | atttcagtga | cgtctatacg | agccttgaac | tgccagaaga | aatcaggaca | 10380 |
| cacaaagttt | tatggggtag | gtgattttgt | ttagtttagt | attaaggcag | atggttgtac | 10440 |
| atgtgcagaa | ctcctttctg | ctaatagcca | ggatgaggct | atatgagatc | acatgggggt | 10500 |
| aggccatgag | gccaaaggttc | cattcttctc | ctgccattca | aaagtgatag | ggctttggat | 10560 |
| agtttaattc | atctctttga | gttatcggtt | tccaaattgt | aaaatgtaaa | taataataca | 10620 |
| atctgcctta | tagggctgtt | atgaagatta | aatgggataa | agaatgggaa | aaatactttg | 10680 |
| aaaactctag | tgtggaaatg | aggacaattg | ttcccaagct | ggtgtcctct | tagtccccct | 10740 |
| atgttctcat | cattattgtg | ttctttat | ctttattatc | attttaatag | tctggaagtt | 10800 |
| gagataaatg | catgcttttc | atcagtctat | gaaatcaaaa | gttcttattc | ttaaaataat | 10860 |
| attaacttta | ttcttactat | gtaataataa | ataggtaccg | ttaacaagtt | ggaaagtgcc | 10920 |
| aaaaaaaaaa | aaaaaaaaaga | aaaaattact | aagctggaca | cagtggcaca | cacctgtaac | 10980 |
| cccagatatt | tgggaggctg | agtcaggagg | attgcttgag | cctaggagtt | cagggtacagc | 11040 |
| ctgggtgtca | tagtaaaacc | ctatctctta | aaaaaattac | ttataatcat | ataaccagct | 11100 |
| gataacttct | tttttttttt | tttttttttt | tgagatggag | tctcgctctg | tcaccagggc | 11160 |
| tagagtgcag | tggcgcaatc | ttggctcact | gcaacctcca | cttcccgggt | tcaagtgatt | 11220 |
| ctcctgcctc | agcctcccaa | gtagctggga | ttacagggtg | atgccaccat | gccagctaa | 11280 |
| tttttgtatt | tttagtagag | atgggggttc | actgtgttg | ccaggctgg | ctccaacacc | 11340 |
| tgacctcatg | atctgcccac | ctcggcctcc | caaagtgtg | ggattacagg | catgagccac | 11400 |
| cgcgctcggc | ctatgattta | ttttttatac | tactttattc | acataacagt | gcttttcaga | 11460 |
| atgtggcgta | ctgcatacat | gaatattatg | cttgacgtg | agtagaacca | atccaccagt | 11520 |
| gagtgtcctg | aagaattggt | cctagagacc | atcagctagc | acaccagtc | ttaaccatgg | 11580 |
| ctttctagac | cttgaggga | tgctcaagtt | agcttctact | gctaggatct | atgttttaac | 11640 |
| taataccatg | tcctaattaa | ttatatagaa | gaatagttcc | cttaatactg | tattaagtgt | 11700 |
| tggctggctc | gtgggttttt | gttggtgttt | gttttttagg | tgagtgtctg | ggtgggtgctt | 11760 |
| tatactggaa | ggaaactgtc | gtccttgctc | aaaaaattgg | gttctgccct | ccacgtttgg | 11820 |
| tactgcca | tctcattaca | attcaaaaca | aggaactgga | aagagttatc | ggtaagatat | 11880 |
| gacagacagc | agggactatt | ataactacag | cttgaatgat | tgaaatgtgg | tgattagtaa | 11940 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| gtaacttctg | aaggagtctc | attgagggat | actttctgtt | atctggaaat | agctatcttg | 12000 |
| cctcctgtac | aatggtaacc | ccccaaaaat | tttgatat | aataaagcac | tttgaagtca | 12060 |
| ttcagtaaat | agagtgaagt | gctcagaaaag | ataactgatg | acatgcaagg | aagaaaatca | 12120 |
| tctttataac | gtgtttgctc | cttgtctgct | gagcaaggca | acaactgggg | gagtgtctgga | 12180 |
| gatgaaccgt | gaataaatc | tatTTTTagg | tgactgtcgt | tttgtttctg | caacatttcg | 12240 |
| cctcttcaaa | cactctaaga | caggaccaac | caagagatgc | caagttattt | acaatggagg | 12300 |
| aattacagga | catgaaaaag | aactaatgtt | tgatgccaat | tttacattta | aggtaaataa | 12360 |
| aacaatttcc | atgacttctg | gtattctttc | tgctcttgcc | cttgtctccag | ctatcttttc | 12420 |
| ttgactttgc | attgcctccc | atTTTTctgg | tgttggtttg | tttgtgtgtg | tgtttaaattg | 12480 |
| tatgtgtgtg | tttcaagtgg | agtaaaaaag | cattttttcc | ccaatactta | tttattttatt | 12540 |
| gacagggctc | cgctctgtca | cccaggctgg | agtgcagtag | cacaatcata | gttcactgca | 12600 |
| gcctgacctc | ctgggctcaa | gcgatcctcc | cacctcaggc | ttctgagtag | ctaggactac | 12660 |
| agactcatca | ccacacctgg | ctaataattg | tatTTTTgt | agagatgggg | ttttgccatg | 12720 |
| ttgcccagac | tggctctgaa | ctcctgggct | caagtgtatg | gcccacctca | gcctcccaaa | 12780 |
| gtgctgggat | tacaggcggtg | aaccacogtg | cccagccctc | aatattttatt | ataaaaaatgt | 12840 |
| ttttggccag | gtgcgggtggc | tcacacctgt | aatcctagca | ctttggggagg | ctgaggcagg | 12900 |
| cagattacct | gaggtcagga | gttcgagacc | agcctgacga | acatggcgaa | aacctatctc | 12960 |
| tactaataaa | aatacaaaaa | ttagccgggc | gtgggtgggtg | gtgcctgtaa | tcccaactac | 13020 |
| tctggaggct | gaggcaggag | aattgcatga | accggggagg | tggagggtga | ggtgagctga | 13080 |
| gatcatgcc | ttgcaactca | gcctgggcaa | cagagtga | ctccatctca | aaaaaaaaaa | 13140 |
| aaaaaaaaaga | agtttttgaa | tacagaaaag | ttaatagtac | aatgaatacc | cacataggca | 13200 |
| ttacctatat | ttcagcaatt | gagaacattt | ttccatgttt | gtgtgtttat | atgtgtatat | 13260 |
| atatatatat | atTTatttgc | tgagccattg | aaaataagtt | gcagatatta | tgacatttta | 13320 |
| cccttaata | tttcagcatg | cgtcccatag | gaatgtaata | tccctctgca | taatcacaat | 13380 |
| accattacac | acctaagaaa | actTTTTtaca | agaagcctca | ttcagacatt | ggattaatag | 13440 |
| ggctatagag | aagtaggatg | gaaaagagta | ggagtatgta | caatagtatt | tcaattgttt | 13500 |
| aattgtgtca | aggaattaag | aaattttaat | gttggatgat | ggcactaatt | ggcattttta | 13560 |
| ctgccctgtg | catagtaaga | tttgttttct | caaaatggaa | aagttcaggc | tttggaaatca | 13620 |
| gatacctggg | ttcaaattct | ggctctatta | ttattgtttt | ttattttttt | ttctgaatgt | 13680 |
| cactagacaa | acttttattg | aagcataaat | tgtggtacag | aaatacattt | taactgattt | 13740 |
| aagtccaaca | ccagtgaaag | gagagattat | ggcaccaaaa | ctttcccttt | cctatcatac | 13800 |
| catgatttag | attatgatgc | aatctacatt | tctcttttct | aggctttgtc | ccatacaaat | 13860 |
| ttgggcagtt | tttcaacatt | agaatttcaa | cttagaatt | cttaattcta | ttaggaaaaa | 13920 |
| aagcaacaaa | aaaaccagac | ctcaagtcaa | caaactctatt | ggatattgtt | tatgaacgaa | 13980 |
| gtccacgtta | agcattgggtc | ctcaaaacag | agctcctcaa | aatattaggt | gctgtgctca | 14040 |
| ttacagaatc | aaactgatca | cactgattga | aaacttcctc | aatgaaattt | tcaatcaaca | 14100 |
| acatgcttca | aataaaagtc | aaacagtgtt | ccaaccactt | gacttcaaac | caagtagatt | 14160 |
| ttaggtttag | aaacactaaa | aaaagggtgtt | tcatTTataa | atacagaagg | aacaaaaaca | 14220 |
| tcactgcac | aatccagaaa | ttatcaaaat | atTTtagagga | caagaaatat | aaaatttagt | 14280 |
| caactttgct | gctttctcag | ttccttaaaa | tcccagagta | tctgcaaata | tagctaaaaa | 14340 |
| gtaccaactc | ttgaaagcct | atattactag | tcatttccca | ttgagtattt | tggaatttta | 14400 |
| tttatgttct | acttatTTat | tcattgtattc | tgctttatga | tgtttatctg | aataatctgg | 14460 |
| acaaattctc | attctgggca | gtcattcggt | tcattcctatg | aatgccatgg | tgagggaaac | 14520 |
| agtgtagtta | gaggaacaga | tgaagtcaga | acactcacat | gcattcacgg | cacagaactt | 14580 |
| taagtcaaca | gacagaaaag | aaatcgattc | tgctttggat | caaagtttat | agaacactac | 14640 |
| ttaatggaaa | ctagtggaaa | tggttgctaa | aggaaaagtt | aaggtgaatg | atccaagctg | 14700 |
| acttgattac | tgaatccaga | acaaaattat | gctaaatctc | tctggtaatt | aactaaataa | 14760 |
| aaatcatttt | atactattat | ttagtaagtt | agtaaaggcg | tgctactcat | tagatgctaa | 14820 |
| tctcattttac | tgaggaacac | agaattgtat | atgttttctg | gctctattat | ttattacttg | 14880 |
| ggtaaacttg | aacaagtcac | caaaattcgt | tgggttacag | tttgttctac | tgtaaaagca | 14940 |
| gggataataa | tacttacttt | gcagaatttc | tataaggatt | agcaataatg | tagcaaaaaca | 15000 |
| ctgggtacat | actgcaagtt | cagtgaaaaag | aagatactgt | cattatttgt | tccaaaagtg | 15060 |
| gaagaactta | ctattaatat | ttcatttttc | tgattttattt | atTTtatctat | tttagagaca | 15120 |
| aagtctctct | ctgtcaccca | tgctggagtg | tagtggcaca | gtcatagctc | actgtaacct | 15180 |
| caaactcctg | ggctcaagcg | attctcccat | ctcagcctcc | caagtagctg | ggactacagg | 15240 |
| catgtgtcac | catgcctggc | taattttttt | tttttatttt | tttgttgggtg | agacagggtt | 15300 |
| tttttttttt | tcttttttga | gaccaagtct | cgctctgtca | ctcaggctgg | agtgcagtg | 15360 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|-------|
| cccgatctcg | gctcactgca | agctccacct | cccgggttca | cgccattctc | ctgccttagc | 15420 |
| ctcccaagta | gctgggacta | caggtgcccc | ccaccacacc | cggctaattt | tttgtatttt | 15480 |
| tagtagagtt | gggatttcac | cgtgttagcc | aggatggtct | caatctcctg | gcctcgtgat | 15540 |
| ccacccgcct | cggcctccca | aagtgctggg | attacaggcg | tgagccacca | ctcccggcca | 15600 |
| agacagggtc | ttatattgcc | caggctgggc | ttgaactcct | ggcctcaagc | aattctccca | 15660 |
| cctcagcctc | ccaaagtgtg | aagcatgtgt | cactgtgcct | ggcttcttct | gatttttttg | 15720 |
| gtctaaatag | catctccaga | tttctttttt | ttttttaatt | taaaaaatgt | atattattct | 15780 |
| ttatttagac | acagggtcct | gctatgttgc | ccacactggg | gtacactggc | tattcacagg | 15840 |
| tgtaaagcata | gcccactata | gtcttgaact | cctggcctca | agggatcctt | ccacctcagc | 15900 |
| cttccaagtc | tgggactaca | tctggctaag | catcttcaaa | tttcttattt | atattattat | 15960 |
| ttatttttga | gatggagtct | tgtctgtttg | cctaggctgg | agtgcagtga | ctcaatctca | 16020 |
| gctcactgca | acctctgcct | cctgggttca | agccgattct | cctgccttag | cctctcgagt | 16080 |
| agcagggtat | acaggcgtgt | gccaccacac | ccagctaatt | tttatatttt | tattagagac | 16140 |
| agggtttcac | catgttggcc | aggctggctc | cgaactcctg | acctcaggta | atctaccgcg | 16200 |
| ctcggcctcc | caaagtgtcg | ggattacagg | cgtgagccac | tgtgcccggc | tgcatcttca | 16260 |
| aatttcttaa | atactccttg | gtatagtggg | gcccttaatg | cttttacta | atgcactgct | 16320 |
| ccttgatgtg | ctgcctattc | cagtagatac | acagaatcag | agtggtaagg | gcctttgaaa | 16380 |
| ccattgattt | gttctagtgg | ctttcaaaaa | ccatttttaa | tacaattatt | ttttaagcaa | 16440 |
| aatgttttat | atatatatat | atatggtttt | tttttttttg | agatggagtc | ttgctctggt | 16500 |
| gcccaggcta | gagtgcagtg | gtgcaatctc | ggctcactgc | aacctcagcc | tccctggttc | 16560 |
| aagtgatttt | cctgcctcag | cctccccagt | agcttggact | acagggtggg | gccaacgcac | 16620 |
| ctggctaatt | tttgcatttt | tagtagagac | agggtttcac | catgttggcc | aggctggtct | 16680 |
| taaactcctg | acctcagggtg | atctgcccac | ctcggcctcc | caaagtacta | ggattataga | 16740 |
| tgtgagccac | tgtgcccagc | cagaaatgca | ctttaaaaac | caccagtcct | tgccctgggca | 16800 |
| tggtgggtca | cacctgtaat | cccagcactt | tgggaggctg | aggcgggtgg | attacctgag | 16860 |
| gtcaggagtt | cgagaccagc | ctgatcaaca | tgatgaaacc | ctgtctctac | taaaaataca | 16920 |
| aaaattagcc | gggcgtgggtg | gcgtgtgcct | gttatccag | ctactcgaga | ggctaaggca | 16980 |
| ggagaatcgg | cttgaaccca | ggaggcagag | gttgcagtga | gctgagattg | agtcactgca | 17040 |
| ctccagcctg | ggcaacagag | caagacttca | tctcaaaaac | aaacaaacaa | agaaaaaacc | 17100 |
| cccaatagtc | caaagcccta | attttcccc | cattattttat | ttttttaatg | ggcaaatttt | 17160 |
| aaaaattgta | tatatattta | tgggtgtacaa | tgggatgttt | tgacatatgt | atacattatg | 17220 |
| gaatgactaa | atcaagataa | ttaaaatgca | ttacctcaca | tactaccat | ttatttgtga | 17280 |
| tgagatcaaa | gtctactctt | ttagcaattt | tcttttttct | ttcttttct | ttctttattt | 17340 |
| cttttttttt | tttttttgag | gcagaatctt | gctctgtcgc | ccaggctgga | gtgcagtggc | 17400 |
| acaatctcgg | ctcactgcaa | cctccacctc | tcaggttcaa | gcgattatcc | tgccctcagcc | 17460 |
| ttccaagtag | ctgggactat | agggtgtgtg | taccacaccc | agctaatttt | ttgtattttt | 17520 |
| agtagagatg | gagtttcacc | atgttggcca | ggctggctct | gaactcctga | cctcagggtga | 17580 |
| tccccctgct | tcagcctccc | aaagtgtctg | gattacaggc | gcgagggtgc | cagcctttta | 17640 |
| gcaatttcca | atacattggt | attaactata | gtcaccatgt | tgtataatag | atctctttta | 17700 |
| cttattcctg | ataactgaaa | ttttgtatcc | tttaaccaac | atctatcctg | ttccaccctt | 17760 |
| gccctcccac | cccctacccc | cagccccctg | taagagcctc | tactcttcac | ctctatgagt | 17820 |
| tcaacttttt | gaaattccac | atataatcta | gcgagggttat | gcagtatttg | tttttcagtg | 17880 |
| cctgcagata | tgacattttt | gggttcaact | ttttgtttgt | ttttgagatg | gaatctcact | 17940 |
| cttgtgcgcc | aggctggagt | gcagtggcgt | gatcttggct | cactgcaatc | tccgcctcct | 18000 |
| gggttcaagc | cattctcctg | tctcagcctc | ctgagtagca | gggattacag | gcgcctgcc | 18060 |
| ccgtgccag | ctaatttttg | tatttttagt | agagacgggg | tttactatg | ttggccaggc | 18120 |
| tggctctctaa | ctcctgacct | cagacgatct | gcctgcattg | gcctccaaaa | ctgctgggat | 18180 |
| tacaggcatg | agacactgcg | accggccaaa | cattttttta | atgcataata | gatgtacata | 18240 |
| ctttcagggc | acatctgata | atttaatat | ttcatataat | ttgtacagat | caagtcaatg | 18300 |
| taactgggat | atccatcgcc | ttaaacattt | gtcttttctt | tattctagga | accttattga | 18360 |
| attattcttt | tctagctatt | ttgaaatata | caatagatta | ttgtgaacta | tagtcaccct | 18420 |
| actgatccat | cgaacactag | gtcttatttc | ttcttattaa | actggatttt | gtactcatta | 18480 |
| atcaagctct | cttcatcctc | cccactctac | ctggcgtctg | gtaaccacca | atctactctc | 18540 |
| tattatcatg | aggteccact | tttttagctcc | cacatatcag | cgagaacatg | taatattcgt | 18600 |
| ctttttgagg | ttggcttatt | tctcttaaca | taatgacctg | cagttccatg | catgttgctg | 18660 |
| caggtgacag | gatttccctc | ttttattttt | ttttattttt | tttttttgag | acagagtctt | 18720 |
| actctgtctc | ccaggttgga | gtgcagtggc | gtgatcttgg | ctcactgaaa | cctccggctg | 18780 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| ccagggttcaa | gtaatttctcc | tgcctcagcc | tcttgagtag | ctgggactac | aggcgcggtgc | 18840 |
| caccacacccc | aactaattttt | ttttttttttt | ttttttttttt | ttttttttttt | ttttttttttt | 18900 |
| tttttttttga | gacggagtct | cgctctgtcg | cccaggctgg | agtgcagtgg | cgggatctcg | 18960 |
| gctcactgca | agctccgcoct | cccgggttca | cgccattctc | ctgcctcagc | ctcccaagta | 19020 |
| gctgggacta | caggcgcccc | ccactacgcc | cggetaattt | tttgatattt | tagtagagac | 19080 |
| gggggtttcac | cgtttttagcc | gggatgggtct | cgatctcctg | acctcgatg | ccgcccgcct | 19140 |
| cggcctccca | aagtgtctggg | attacaggcg | tgagccaccg | cgcccggccc | actaattttt | 19200 |
| gtatttttag | tagagatggg | gtttcacatg | ttggcaaggc | tggctctgaa | ctcctgacct | 19260 |
| cagggtgatcc | gcctgcctcg | gcctcccaaa | gtgctgggat | tacaggcttg | ggccaccgca | 19320 |
| ccaggccagg | atttcccttct | ttttcaagtc | tgaatagtat | tccagtgtgt | acatacata | 19380 |
| ctacgtttttc | ttttatccgtt | catctgtttg | agtcttcttt | ttttcttagt | ttagctaaag | 19440 |
| atttattttta | ttttttcaaa | aaactaattt | ttcattttgt | tgatcttctg | tattttttta | 19500 |
| gtctcaattt | catttatattc | tgtgtgtgatg | ttctttcttt | ccttctacta | attttgagtt | 19560 |
| tgatttggttc | ttgcttttat | agttccctca | tgggcattac | taggttggtt | atttgaagtc | 19620 |
| tgttcccttct | ttccttcatt | ccttccctcc | tccctccctc | cctccctccc | ttcttccctc | 19680 |
| cttccattct | ttcttttttt | tttgagaggg | aatctcgctc | tgttgcccag | gttggagtgc | 19740 |
| agtggcgcgga | tctcagctca | ctgcaacctc | cacctcccg | gttcaagcaa | ttctcctgtc | 19800 |
| tcagcctccc | aagtagctgg | gattacaggc | atgcaccacc | acgcctggct | aatttttttg | 19860 |
| tatttttagt | agagacgggg | tttcaccata | ttggccaggc | tggctctgaa | ctcctgactc | 19920 |
| tgcccgcctc | agcctcccaa | agttctggga | ttacagggtg | tagccattgt | gcccggccct | 19980 |
| tctttccctt | cttcttcttt | ctttctcagg | gtctcactct | gtcacctgga | ctggagtgca | 20040 |
| gtggtgcaat | catggctcac | agcagctttg | acctcctggg | ctcaggcaat | cctcctaccc | 20100 |
| cagcatccca | agtagctggg | actaaggcta | ccatgcctgg | ctgatttttg | tattttctgt | 20160 |
| agagacaggc | tttcaccatg | ttgcccagtc | tgctcttgaa | ctcctgggct | caagcaatcc | 20220 |
| acctgccttg | gcctcccaaa | gtgctgagat | cttatttgaa | atctttcaac | ttttttgata | 20280 |
| taggcattac | ttgaaatctt | tctacttttt | tgatataggc | atttattgct | ataaactttc | 20340 |
| ctcttagtgc | tgcttctgct | gtatcccata | gatttttgca | tgttgtattt | ccattttcat | 20400 |
| ctgtttcaag | atatttttaa | tttttctcct | aatttcttca | tggacccatt | ggctattcag | 20460 |
| gagcatgttg | tttaattttcc | atgtgtttgt | gtattttcca | agggtcttgt | tattgatttc | 20520 |
| taattttatt | ccatagtggg | gagaaagata | cttggttatga | tgtctacttt | tctgaatttg | 20580 |
| ttaagacttg | ttttgtggcc | taagatatag | tctatgtctg | agaatgttcc | atgtgctatt | 20640 |
| gagcagaatg | tctattctgc | agcagttgag | taaaatgctc | tgtgaatgtc | agctaggcct | 20700 |
| atttgagcta | gtatatagtt | taatgtttct | ttattatttt | ctgtctggat | gatctgtttt | 20760 |
| actgagagtg | agggtgtggtg | ttagagtccc | ctactactat | tgcattacag | tatatctctt | 20820 |
| cttttagatc | tattaatggt | tgctttatat | actttggagc | tccaatgttg | agtgc aaaga | 20880 |
| tacttatatc | ttcttgctga | attgacctct | ttatcattat | atagtaacct | tctttgcctc | 20940 |
| tttgacagcc | ttgattcaca | gtctgtttta | tctgatgtaa | gtatagctac | tctgttctt | 21000 |
| ttttgggttc | cagttgcttg | gaatgtcttt | tttccacccc | tttaacttcca | gtatttttat | 21060 |
| aagtaaagta | ggtttcttgt | aggcagcata | taatttggtc | ccatttttgt | atccattcag | 21120 |
| ccactctatt | cctttttttt | gggggggggt | cccaagtttt | attcaagaac | tcataccaaa | 21180 |
| tattccagat | aaataaattt | ttatcttcac | cttctcctc | ttctttttcc | agggttaatct | 21240 |
| ggaattaacg | tcattcataa | taactctttt | tgctgttagc | aactacacac | aacaaatcac | 21300 |
| atagattatt | cttcaaatat | tttttggtga | gatattttcaa | ataccttttg | gaaaaaggta | 21360 |
| cctcagaagt | cacagtgate | ttgctgttgc | tcttttcgat | ggttataatg | ctccaccaag | 21420 |
| attcccagct | tttccattca | ctttaatcct | ctcttgcaaa | aactgctcaa | aattggcagc | 21480 |
| atctatgatt | ccatttttcta | caagggtggg | acagtcaaga | gtgaacatca | taacctgctt | 21540 |
| ctttttttgc | ctctctttgc | cacaagcttt | ttcacagcac | tatgcctctt | aattggagaa | 21600 |
| ttgagtcatt | ttacatttag | tgttattatt | gatacataaa | gacttaacat | ttttttaaat | 21660 |
| tgatacataa | ttgatgtagc | tattttgggg | cgttcattgtg | ataatttaaat | acattcatat | 21720 |
| aattttgtaa | gattaaatta | gtgtaatttg | gataacctatc | accttcaata | tttgtctttt | 21780 |
| cttttctttt | tttttctgtg | agatggagtt | ttgctttttt | tgcccaggct | ggagtgc aat | 21840 |
| ggcgcaatct | cggctcactg | caacctccac | ctcccgggtt | caagcaattc | tctgcctca | 21900 |
| gcctcccgag | tagctgggat | tacaggcatg | caccaccatg | ctcagctaat | tttgatattt | 21960 |
| tagtagagac | ggggtttttac | catgttgggc | aggctgggtct | cgaactcctg | acctcagggtg | 22020 |
| atccactcgc | cctggcctac | caaagtgtctg | ggattatagg | catgagccac | cacacctggc | 22080 |
| cctgtctttt | ctttatgttg | gaaacattca | aattattctc | ttctagctat | tttgaaatat | 22140 |
| acaatatatt | attgtaaact | agtcacttta | ctgatataatc | aaacactagg | tcttatttct | 22200 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| ttcatcaaac | cctatatata | tatatatata | tatatatata | tatttttttt | tttttttttg | 22260 |
| agacggagtc | tcgctctgtc | tcgctctgtc | gccaggcta | gagtgcagtg | gcacaatctc | 22320 |
| ggcccactgc | aagctccgcc | tcccgggttc | atgccattct | cctgcctcag | cgccccgagt | 22380 |
| agctgggact | acaggtgcct | gccaccatgc | ccggctaatt | ttttgtattt | ttagtagaga | 22440 |
| cgggggtttta | ccatgttagc | caggatggtc | tcaatctcct | gaccttggtga | tccacccacc | 22500 |
| tcggcctccc | aaagtgtcgg | gattacaggc | ttgagccacc | gtgcccggcc | aaaccctata | 22560 |
| tttataacca | ttaatcaact | tctctttatc | tcccccatto | tgtacccttt | ctggcctttg | 22620 |
| gtaactatca | atatactctc | tatcttaatg | agttccactt | tttttagctt | ccacatatca | 22680 |
| gtgagaacat | atgatatattg | tctttctgtg | tttgcccttat | ttctcttaac | atgacctgca | 22740 |
| gttccatgca | tcttgctgca | aatgacagga | tttccttctg | ttttaaaatc | tgaatagtat | 22800 |
| tccatttgtt | atataatgcca | cgttttcttc | atccattcat | ccattgctgg | atgcttaggt | 22860 |
| tgattccata | tcttggttat | tgtgattaat | gctgcagtca | acattaggag | tgcagatatt | 22920 |
| tccttgacat | actgatttca | tttcattccc | ttcccttccc | ctgcctgtct | gcctgccttc | 22980 |
| cttctcttct | tccttccctc | cttcccttct | tccttccctc | cttcccttcc | tccctccacc | 23040 |
| ccccccgccc | ctttcagatg | gaatctggct | ctgtcgccca | ggctggagtg | cagtggcgca | 23100 |
| atctcagctc | actacaacct | ccgcctcctg | ggttcaagca | attcttctgc | ctcagcctcc | 23160 |
| cgagtagctg | ggattacggg | catgtgccgc | catacccagc | taattttttt | gtatttttag | 23220 |
| tagaggcagg | gttttaccat | attggccagg | ctggctctga | actcctgacc | tcatgatcca | 23280 |
| cctgcctcag | cctcccaaag | tgtcgggatt | acatagggtg | gagccaccgt | acacagccag | 23340 |
| tttcattttc | ttttcttttt | tttttttttt | tgagacggag | tctcgctctg | ttgcccaggc | 23400 |
| tggagtgtctg | gagtgcagtg | gcacgatctc | ggctcactgc | aagctccacc | tcccgggttc | 23460 |
| acaccattct | cctgcctcag | cctcccaagt | agctgggaca | acaggcgctc | gccactatgt | 23520 |
| ccggctaatt | ttttgtattt | tttttagtaga | gatgggggtt | cactgtgtta | gccaggatgg | 23580 |
| tctcgatctc | ctgaccttgt | gatcgggcca | cctcggcctc | ccagagtgtc | gggattacag | 23640 |
| gtgtgagcca | ccgcgcctgg | cccattttct | ttagatatat | acccaagtag | ggggattgct | 23700 |
| gggtcatata | gtagtcttat | ttttaatttt | ttgaggaatc | tccatactgt | ttcccataat | 23760 |
| ggctgtacta | atttaaattc | ccaccaacag | tgtgtaagga | ttagtgctgg | tgaggatgtg | 23820 |
| gagaaaacga | tacttctggg | cattttttct | tctattgaga | ctaaagtgc | aactcttagt | 23880 |
| attttttttt | atactacctt | ttaggaaggt | gaaattgttg | aagtggatga | agaaacagca | 23940 |
| gctatcttga | agaattcaag | atttgctcaa | gattttctga | tcagaccaat | tggagagaag | 24000 |
| ttgccaacat | ctggaggctg | ttctgctttg | gagttaaagg | ttagtttggc | tttctactacc | 24060 |
| tgagagaact | attttattta | tttatttttg | agatggagtc | tctctctgtc | accagactg | 24120 |
| gagtgcagtg | gtgtgatctt | ggctcactgc | aacctccgcc | tcctgggttc | aagcaattct | 24180 |
| ccctgcctca | gcctcccgat | tagctaagat | tacaggcacc | caccaccacg | cccggctaatt | 24240 |
| ttttgtgttt | tttagtagag | atgggggttt | gccatgttgg | ccaggctggg | cttgaactcc | 24300 |
| tgacctcagg | taaccacact | gcctcagtct | cccaaagtgc | tgggattaca | ggcgtgagcc | 24360 |
| actgtgcccg | gccagtatgc | atggtctctt | gaggcgcact | tctcttgctg | gtcaaagtgt | 24420 |
| gttagacggg | tatataccag | ttaaacgcca | ccattttgcc | tcttaatgtg | catgcttgag | 24480 |
| cccacttgcc | caactccga | gatcttatcg | ggaagctgct | gatcaccagt | ttcagggtgt | 24540 |
| tctgtttatt | gggagacttc | ctttccctgg | tactgtctgt | gactaattat | gattttcgag | 24600 |
| agacagttaa | caaccacctg | atcatcacct | aatgatcgcc | tgacattcct | ggtggagtcg | 24660 |
| gcgcggggag | ccctctcctg | ccctgctcac | gcctgactag | ctattatacc | tgctttaaca | 24720 |
| agttctccaa | aattcagaga | cctttcgtga | gtattctgat | tttataataa | aatagttatt | 24780 |
| tgcataagtt | tagtaagagt | cttttctctc | aaaacaggac | aattggagac | acttggttat | 24840 |
| tttaccaaaag | ctttgactgg | aataacattt | gtaggtaaag | ttccagcaaa | gccaacttga | 24900 |
| aaagagccta | tctggccaaa | ctcttgctgg | acttcatgca | aatgatcagg | caaagttaa | 24960 |
| taagcctaaa | atttatattg | cacataaatt | ggccttacta | taatttgcct | ttagtataaa | 25020 |
| aggaggagct | gggtgcagaa | gttcacactc | ataatcccag | cactttggga | ggctgagaca | 25080 |
| ggcagatcac | ttgaggccag | gagtttgaca | ccagcctggg | taacatgttg | aaaccctgtc | 25140 |
| tctacaaaaa | atacaaaaaa | attatctggg | tatggtgggtg | catgctggta | gttccagtta | 25200 |
| ctcaagaggc | tgagatggga | ggattgcttg | agccccaggga | ggtggagggc | aatgagccaa | 25260 |
| gactgcacca | ctgcactcca | gcctggggcaa | cagagtggaga | ctctgtctca | aaaaaaaaaa | 25320 |
| aaaaaaaaaa | aaaaagaaag | aaggctagag | agagaaatgg | tttcaaagga | aaactataac | 25380 |
| acttgttact | agatttccag | cctggacttt | tgtttttgag | tgcatattga | atcattaatt | 25440 |
| atttcttggc | tacaataacc | ctctaaagat | aaaccagggt | ataatttttc | ttcatgtttt | 25500 |
| tagtttgtgc | cctaagtggg | ataggttcc | tattctgttc | tgacacacga | atactctttt | 25560 |
| gactgtcata | ttattaatgt | tatttatagc | tccttgtttt | acttccaaag | aaaccagaat | 25620 |

| | | | | | | |
|-------------|-------------|--------------|-------------|-------------|-------------|-------|
| catgatattc | taaggttaga | gaatcccccg | tttggaaatcc | cactgggtcct | aatctgcttt | 25680 |
| tcactgcaaa | ttccgtgctg | ctaaaattat | ataagcactc | ttctctaggc | ccagggacct | 25740 |
| atcacacaaa | aggtaggtgt | gtgagactgt | aagggccagt | tttgagagaa | ttatttcaga | 25800 |
| ctctccaaat | caaaaatggg | cacacagatg | cataaacagc | tggtaaaata | agggactctg | 25860 |
| cctcctgggt | tattatgtgt | gtggcacctt | ttcatccatc | ccaatcataa | agaatttcct | 25920 |
| gcttctcgta | gaatgaaaag | aaaattatta | ctgagaggat | ataaaggtag | ctcatgtcaa | 25980 |
| agcctcctag | gtttaatact | ctgagttatg | agatttatgc | agataacata | tatatTTTTT | 26040 |
| aaaatttttag | aacaggccag | gcacagtggc | tcaagcctgt | aatcctagca | ctttgggagg | 26100 |
| ccaaggtggg | cagattgcct | gagctcagga | gttcaagacc | agcctgggca | acatggtgac | 26160 |
| accccatctc | tactaaaata | caaaaaataa | attagatggg | catggtggcg | tgcgctgtga | 26220 |
| gtcccagcta | cttgggaggc | tgaggcagga | gaattgcttg | agcccgggag | gcggagggtg | 26280 |
| caatgagacg | agattgagat | ggcgccactg | cactccagcc | tggcaacaga | gtgagactct | 26340 |
| gtctcaaaat | aaataaataa | ataaataaat | aaataaataa | ataaataaat | aatttttagaa | 26400 |
| caaattactg | aaagaccaca | aaaaaaaaaa | ctgtagcaca | acggaagtct | ctaaattcct | 26460 |
| tagcttaaaa | ggttttaaca | gtgcttatgt | tttgtatagc | taattgctgt | aagtctgtaa | 26520 |
| ctaaaaccaa | gattacagta | gcacaatgca | tagaagttaa | agataagtca | atTTTTtaac | 26580 |
| ctcacctttg | gctttttgtt | tgttggcttt | tatatataaga | aattttaagg | gtttattaat | 26640 |
| gcctatccac | atccattccc | atctggccta | gaactttctt | ttttttgggtg | ggggaggggg | 26700 |
| acggagtctt | cctctgtcac | ccaggctggg | gtgcagtggc | gtgatctcat | ctcactgcaa | 26760 |
| cctccgcctc | acagggttcaa | gtgattctcc | tgccctcagcc | tcctgagtag | ctgtaattac | 26820 |
| aggcatgtgc | caccatgcct | ggctaatttt | tttttctttt | tttttttttt | ttccgagatg | 26880 |
| gagtcttgct | ctgttgccca | ggctggagtg | cagtgggtgcg | acctcggtc | actgcaacct | 26940 |
| ctgcctccca | agttcaagcg | attcttctgc | ctcagcctcc | agagtagatg | ggactacagg | 27000 |
| tgcgtgccac | catgcctggc | taatttttat | tttatttttt | tagtagagat | gggggttcat | 27060 |
| catattggcc | aggctgggtct | cgaactcctt | acctcatgat | ccaccacact | tggcctccca | 27120 |
| aagtgtcggg | attataggca | tgagccactg | tgcccagccc | taattcgtat | tttttagtaga | 27180 |
| gacaggggtt | caccatgttg | gtcaggctgg | tctcaaaactg | ctgatcttag | gtgaccaacc | 27240 |
| tgtctcggcc | tcccaaagtg | ctgagattac | aggggtgaac | caccatgcct | ggtctggcct | 27300 |
| agaactttca | aattogetat | gtgtcttttg | gctctaagcc | ccttgaccat | aggggtccca | 27360 |
| ccaaggcaca | agatggaccc | aggggaaggca | gctgtgccac | cccagcaaca | cagtgagata | 27420 |
| aaataaaagt | ttggtgacca | ttgatgttgc | ctctgacaaa | tctaggccag | aatgcggaga | 27480 |
| aagtaaatca | aaaataaaat | tctaggccgg | gcgcggtggc | tcacacctgt | aatcccagca | 27540 |
| ctttggggag | ccgaggcggg | tggatcacaa | ggtcaggagt | tcgagaccag | cctggccaac | 27600 |
| atagtgaaac | cccgtctcta | ctaaaaataa | aaaatcagcc | aggcgtgggg | gcaggcacct | 27660 |
| gtagtcccag | ctacttggga | ggctgaggca | ggagaattcc | ttgaacctgg | gaggtggagg | 27720 |
| ttgcagtggg | ccgagatcat | gccactgcac | tctaacctgg | gcgacagagc | gagactccat | 27780 |
| ctcaaaaaat | aaaaaaaaat | aaaaaaaaataa | aaaaataaaa | taaaattata | aacctcaac | 27840 |
| catctgaacg | gacccctcct | gtcgggcaaa | ggcattgcaa | agttatccta | aaaaactagt | 27900 |
| tcaggtcacg | aagggaaggga | gaagtttgga | catgcctcat | tattccctcc | tccttttttg | 27960 |
| aattcagaca | ctgctgacca | gcattaccat | taaaacagat | cttaagactg | atagaacaga | 28020 |
| ctctttaaat | ctggtaagaa | acattttaca | tctattctct | ctgtagcctg | ctgcctagag | 28080 |
| gcttcatctg | catgataaaa | ccttgggtctc | cacaatctct | tatcataacc | tagacactcc | 28140 |
| cttctattga | tcccagggtct | ttggattata | actcaaccaa | ttgccaatca | caaaatcttt | 28200 |
| gaatctgcct | gtgacctgga | aatccccact | tccagttgtc | ccacgtttct | ggtctgaacc | 28260 |
| aatgtacata | ttatatgtat | tgattgatgt | cttatgtctc | tctaaaatgt | ataaaaaccaa | 28320 |
| gttatagggt | gaccactttg | ggcacatgtt | tgacagatctc | ctgagggctg | tgacacaggc | 28380 |
| cattggtcac | ttatttggct | cagaataaat | ctttttaagt | atTTtagagt | ttgacctttt | 28440 |
| ttgttgacaa | tgTTtaacat | cctacagtta | tgacacccta | atTTgaattt | atacagctta | 28500 |
| acttcaataa | catactaaaa | ttctgctcct | ttaaagcttg | ttctcaacta | tttttagttct | 28560 |
| tttttttttt | tttccattga | cagagtttca | ctctatcacc | caggctggag | tgacagtggca | 28620 |
| cgaatttggc | tcactgcagc | ctctgcctcc | tgggttcaag | tgattctcct | gccccagcct | 28680 |
| cacaagtatg | tggtgattaca | gggtgcggcag | ccacatgccc | tggctaattt | tttgtatttt | 28740 |
| tagtagaggc | gggggtctcat | catgttggcc | agcctgggtct | cgaactcctg | acatcagatg | 28800 |
| atccaccagc | ctcggcctcc | caaagtgtcg | ggattacagg | tgtgaactac | cacgcccggg | 28860 |
| tctttctagt | tcttgatata | acaaaattat | gtctttattc | atTTtggtgc | cccaaaacgt | 28920 |
| aaactaataa | ttatttttaa | tgcattgggtc | tcttaaatca | tgtggaaaac | aaaaagtaga | 28980 |
| gttacaaacc | attgttacaa | taataactagc | tttgccgggt | gtggtggctt | acgccaccag | 29040 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| gtgatccacc | cacctagggtt | gcccagcctg | ggcaacaaga | gcacaactcc | atctcaaaaa | 29100 |
| aacaaaaaca | aataaaacaaa | aaaccccaat | aataccagct | tttttttttt | tttgagacag | 29160 |
| agcttcgctc | ttgttgccca | ggctagagt | caatggtg | gtcttggtc | accgcaacct | 29220 |
| ccgcctcctg | ggttcaagcg | gttctcctgc | ctcagcttcc | caagtagctg | ggattacagg | 29280 |
| tgcgcaccat | cacagccggc | taatttttgt | attttttagta | gagacggggt | tttaccatgt | 29340 |
| tgggtcaagct | ggtctcaaac | tcctgacctc | aggtaatcca | cctgccttgg | cctcccaaaag | 29400 |
| tgctgggatt | acaggcatga | gccaccgtgc | ccggccaatc | ccagcacttt | gggaggctga | 29460 |
| ggctggcaga | ccacttgagg | tcaggagggtc | aagaccagcc | tggccaacat | gctgaaaccg | 29520 |
| tgtctgtact | aaaaatacaa | aaattagctg | ggcacggtgg | caaatgccta | taatcccagt | 29580 |
| tacttggggg | gctgaggcag | gaggatcggt | ttgagcccg | gatgtggagg | ctgtagttag | 29640 |
| ccgtgatcac | aacactgtac | cccagcctgg | gcgacagagc | aagaccctgc | ctcaaaaaaa | 29700 |
| aaaaaaaaaa | agcacaaaagc | tttttgagaa | atcactttca | aaaatggtag | atttgtagt | 29760 |
| ggggaagggt | aatcgaaacct | aaaatataag | aatcctggac | cccaaaacct | ggagccagta | 29820 |
| ttaccagcat | gaatctaacc | caagctcagt | atacaagcca | cctgtagagc | taaagagtga | 29880 |
| tttactaggc | cgggcacgggt | ggcttacgcc | tgtaatccca | gcactttggg | agccgaggcg | 29940 |
| ggtggatcac | gagggtcagga | gttcaagacc | agcctggcca | agatggtgaa | accccgctctc | 30000 |
| tactaaaaat | acaaaaaaaaa | ttagccgggc | gtgggtggcat | gcgcctgtaa | tcccagctac | 30060 |
| tccagaggct | gaggcagaga | attgcttaaa | cctggagggg | cggagggttg | agttagccga | 30120 |
| gatcgcgcca | ctgcactcca | gctgggggtga | cagagtga | ctccatctca | aaaaaaaaaaa | 30180 |
| aaaagagtga | tttactttct | ttgctttatt | aaattcttca | gcactctgct | attctgactc | 30240 |
| ttctgttggt | cgaagaagggt | gatactttgg | aaagtagaca | gatttggctt | ttgagtattc | 30300 |
| aatccattaa | acatttcaaa | aatatgtcac | tgataatttg | aaactcctga | gagttcattg | 30360 |
| ataaggaaa | ctgctggtga | gaatcaatat | ttattttaaa | aggcttttat | cattctaatt | 30420 |
| cttctaaaac | ctgggtttcct | aaatactgat | tataaaaagct | atcagaaggc | gtgggtggctc | 30480 |
| acgcctgtaa | tcccagcact | ttggggaggc | cgaggcggt | ggatcacgag | gtcaggagat | 30540 |
| cgagaccatc | ctggctaaca | cgggtgaaacc | ccgtctctac | taaaaataca | aaaaattagc | 30600 |
| cgggcgtggt | ggcgggtgcc | tgtagtccca | gctactcggg | aggctgaggc | aggagaatgg | 30660 |
| cgtgaaccgc | ggaggcgag | cttgcaagtga | gcagagatca | tgccactgca | ctccagcctg | 30720 |
| ggcgacagag | tgaggctccg | tctcaagaaa | aaaaaaaaaat | gctatcagaa | gataatgggt | 30780 |
| acaagtaaag | agggctcttc | ctcgagctac | agtattttca | gtgtactctg | gctttttttt | 30840 |
| tttctcttga | gacagagtct | cgctctgtca | cccaggctgg | agtgcagtgg | cacgatcttg | 30900 |
| gcttactcct | ccgcctcctg | ggttcaaaac | attctcctgc | ctcagcttcc | cgagttagctg | 30960 |
| ggactacag | cacagccac | cacgcccggc | tcattttttg | tattttaata | gagacggggt | 31020 |
| ttcaccgggt | tgcccaggct | ggtggtgaac | tcctgagctc | aggcaatccg | ccgcctcgg | 31080 |
| cctcccaaa | tgctgggatg | acagggtgtga | gccactgtgc | ccagccactc | tggctatttt | 31140 |
| ttttaaaaaa | ggagttaaat | gagtttgctt | ctgcagatga | ccattttctt | tctgcgtagc | 31200 |
| tgtccttggt | ctccctccca | gtgtgcgtgc | aacacatgta | caggagggtt | ttgaccttag | 31260 |
| atataaattg | taaaattcca | catatttgaa | ctggtttatc | ccaacataag | gtctcctttc | 31320 |
| tgctttat | cagcctgcag | atgtgccaat | gtctttagggt | cagtttcaag | tttttgaaat | 31380 |
| gggaataagt | gacactgaag | gaagatttta | ataaatgaaa | cagttgtgtg | acctaggaat | 31440 |
| ataaccttgt | gctcttaggg | aaggacattc | ttatcttttt | tttttttttc | ttaacggaag | 31500 |
| acctttatga | taaacgctgg | agtacagaca | gtacacgcag | ctggcatgca | gggtattgca | 31560 |
| tatacttaac | atcttgagag | tccttctgct | ttttcttcat | cttcttttta | atcctgatata | 31620 |
| gcaaaatgta | ttttgccatt | aaaacaattg | tactattaaa | acactgcagc | atctggctgg | 31680 |
| gcgtgggtgg | tcacacctgt | aatcccagca | ttttgggagg | ctgaggcggg | tggatcactt | 31740 |
| gaggtcagga | gttcaacagc | agcctgtcta | acatggtgaa | acccctctc | tactaaaaat | 31800 |
| acaaaaatta | gctgggtgtg | gtggcggtg | cctgtaatcc | cagctttttg | gaagactgag | 31860 |
| gcaggaggat | cacctgggag | gcagagggtg | cagtgaacca | agatcgtgcc | actgcactcc | 31920 |
| agcctcggcg | acaaagggag | actccctctc | aaaaacaaaa | aaacaacaaa | acactgcagc | 31980 |
| atctgaaatg | atgcaaacag | gattagggtc | atggactgtc | ttaatagtaa | tggtagtaat | 32040 |
| agcatataca | accatagcag | taatatagag | gaattaaact | ttattgaata | gttaatatgt | 32100 |
| ttaaggcacc | ctgtcattta | gtcctcacaa | tcacccctat | tatcttcatt | tgacagatgg | 32160 |
| agagactgag | gctctgaaag | attcattttac | aaatccaaag | tcatacagct | agaaagtgggt | 32220 |
| gaatttgac | ccacatctga | ttctggagct | ggcactctaa | accagtgtgc | tgctccatct | 32280 |
| ctccatagtt | gtacttctca | tagaatcaca | ggatgttggt | gcaggaaaagg | actgcttata | 32340 |
| tctgggtacc | ccacctttca | tttcttcaa | gtcttgagat | ctttttgaac | tagaagcatg | 32400 |
| catttagaag | tgatattgat | atcaccatct | cctgttggtg | gatagatcat | tgagtggaaa | 32460 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| gaagaggggtt | caaggggattc | tcccacctca | gcctcatagt | agccaccacg | cccaactaat | 32520 |
| ttttatattt | tcagtagaga | cgggggtttca | tcatgttggc | caggctgggc | tcgaactcct | 32580 |
| gacctcaggt | gatccactgc | cttggcctcc | cagagtgtctg | ggattactcc | cagagtacat | 32640 |
| gagccaccgc | accaggccag | ggcaaaccct | ttcaagcagg | agttccagta | tactgagaga | 32700 |
| tggaaatgca | attgatgtga | agtcctagca | gtagcaacca | gcagagctgg | ccttcttcca | 32760 |
| ggcttggaga | tcctctgcca | gatgctcatc | ttaccagatg | caggcagacc | tcttcatttc | 32820 |
| agaaaggtag | acactgaggg | acagagagac | caaggccagc | aggaagtcag | tcacttttagt | 32880 |
| aaaggggtcca | ccagtctatc | agtttcatga | atgtagagtc | tgtgcctgcc | ttgtacaccc | 32940 |
| ctctattttgc | agtgaccaga | ataagtagta | ggactgtaaa | tttatgttat | aatgaattca | 33000 |
| ttaccattat | ttaaagtggc | atgttcatgc | tttttttttt | ttttttgaga | tggagtctcg | 33060 |
| ctctgtcacc | caggttggag | tgcagtgggtg | tgatctcagc | tcactgcaac | ctccacctcc | 33120 |
| taggttcaag | tgattctctt | gcctcagcct | cccgagtagc | tgagactaca | gacgtgccac | 33180 |
| cacacccagc | taattttttg | tattttttagt | agagatggga | ttttgccata | ttgcccaggc | 33240 |
| ttgtctcaaa | ctcctggcct | caggtgatcc | attggcctcg | gcctctcaaa | gtgctgggat | 33300 |
| tacaggcgtg | agccaccgtg | cccagaccct | gtgctcttga | tttccctatct | ttgtacttgg | 33360 |
| cttttctctg | gccccactgg | tactattgtt | agagggtatct | cattttggagg | tgaaaggagg | 33420 |
| ggaaataaat | acagcagtct | tgtcttttaa | ataaatacag | cagtcttatg | ttactctact | 33480 |
| ctgagatctg | tctggccatt | gttggcaatt | tcatctgagc | atcagcaatt | gctagtgaca | 33540 |
| gccctacatc | tgggactcac | tttccctgtt | ggtataaatg | tttctggaga | ttagaataag | 33600 |
| ggaagagaag | tcgttttagc | atttccgtat | ctcagttcca | aagaggttta | aaaggcacgt | 33660 |
| gcaaatgaca | acccacaaaa | acaaaatcaa | ctgagcaaaa | atcaatgctc | tgccaagag | 33720 |
| ggaccatctt | taagaagctt | taagtgaagt | ttaccttgaa | agttgtaatt | agaagcttca | 33780 |
| ggaagcaagt | gccttttatg | cagaatgact | gatgttactc | ccaggatctc | atggaattgt | 33840 |
| aaaattttat | ctctgttctg | tgtaatgcaa | cctaaatcaa | acagaaatat | tagtggtttg | 33900 |
| gtacatcaaa | acacctttta | cttgtccttt | catttttggtt | tgcccttttga | caggatataa | 33960 |
| tcacagatcc | atttaagctt | gcagaagagt | ctgacagtat | gaagtccaga | tgtgtccctg | 34020 |
| atgctgctgg | aggctgctgt | ggcacaaaga | aaagctgcta | aatctatagc | caaccagggg | 34080 |
| accacagtag | tgggcaagag | tgatctgcat | gttttttaac | ctgcttttcc | ccatagcaca | 34140 |
| gaccataaga | aacaacaaat | ggggccgggc | acagtggctc | atgcctataa | tcccagcact | 34200 |
| ttgggaggcc | gaggcaggca | gatcacctga | ggtcaggagt | ttgataccag | cctggccaac | 34260 |
| atggtgaaat | cctgtctcta | ccaaaaatac | aaaaaaaatt | agctgggcat | ggtggtgcac | 34320 |
| acctatagtc | tcagctactc | gggaggctga | ggcaggagaa | ttgcttgaac | ccaggaagta | 34380 |
| gaggctgcag | tgagtaagca | tcacgccact | gtactccagc | ctgggcaaca | gagcaagact | 34440 |
| ctgtctcaaa | agcaaaaaaa | aaaaaaaaaa | aagaaagaaa | gaaaaagaaa | acaacaaatg | 34500 |

<210> 2

<211> 34500

<212> DNA

<213> Homo Sapiens

<400> 2

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|-----|
| ttcccatccc | ctctttttaa | gatacataca | atcaaaaaat | agaatttttt | taatcgaaaa | 60 |
| cactccgacc | cgcaccaccg | agtgcggaca | ttaggggtcgt | gaaaccctcc | ggctccgccc | 120 |
| gtctagtgtc | ccagacctct | aactctggca | ggaccgattg | tgtcactttg | gggcagagat | 180 |
| gatttttatg | ttttttaatc | gaccgcgacc | accgcccgcg | gacatcaggg | tcgataagcc | 240 |
| ctccactccg | tcatcttacc | gtacttgggc | cctccgcctc | gaacgtcact | cgactctagg | 300 |
| acggtgacgt | gaggteggac | ccactgtctc | gctctgagac | agagtttttt | tatttttttcg | 360 |
| aaaacgggta | taaattttat | actgaactac | actctcagaa | ttaaagaaga | tgcgatcatat | 420 |
| gtctatatat | cgtaaggaca | gtaaatcgtc | cccactatca | ttttgttttt | ttgtttttttg | 480 |
| gggtgttttg | gacaccactc | cgtgactggt | tagtcttact | aactaccagt | gtcagaccag | 540 |
| gttttaaatcg | gggggtgtgg | ctgtgggtacc | tccttttcac | tctcattgag | ttaaattcaa | 600 |
| ctgtcaccaa | acaaaataac | gtcaaataga | cacacactta | tccatctaaa | ttcctaacaa | 660 |
| ccggtccaca | ccaccgagtg | tggaccttag | ggctcgtgaaa | atcctccgtc | tccgtccgcc | 720 |
| tagtgaactc | tagtcctcaa | gctctgtcgg | accggttgta | ccactttggg | acagagatga | 780 |
| tttttatgtt | taatcggtcc | gtaccatcac | gtacggacat | taagggtcgat | gaaccctccg | 840 |
| actccgtcct | cttagcgaac | ttggcccttc | cgtctccaac | gtcactcggc | tctaacgcgg | 900 |

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| taacgcgagg | tcgaacccgt | tggtctcgct | ttgagacaga | gttttttttt | tttttttttt | 960 |
| ttcctaacag | tttactaaga | acattcattt | ggtatttaat | ttctattgtt | ttgttcgtgt | 1020 |
| tctcttttta | ctatgtcggg | aaaggaactg | gagagtgatt | agacgggaaa | attctatttc | 1080 |
| tatagtaaaa | ttgatactct | tccattgacg | aaaagatttc | ctcgagttaa | atacttctat | 1140 |
| tataaaactt | ttgattataa | atcctcacaa | aagtggtaag | atactaaccg | gttttttgatt | 1200 |
| cactatgaat | atTTTTgtga | ttcaaaatat | gtatatgatc | aacctttata | aggttcgcga | 1260 |
| tctttataag | gttggttccta | ataaagggtac | cccaattaaa | caatttttat | attttctgtg | 1320 |
| gtggaaagat | aattaaacat | tggtgattaa | ctgtagtctc | ttctactttt | aaatgatcga | 1380 |
| cctatagttg | gtctaaaaac | ataataaccg | ttgactctaa | ctttttactt | acttttctcag | 1440 |
| atgaagtagg | taaatctata | ggaaagtga | cctagaggga | caaaggaatg | acaggattac | 1500 |
| ttatctttac | tagcaatggt | cgacccgtac | caccgaacgt | ggacatcagg | gtcgtgacc | 1560 |
| cctccgactc | ctccctccta | cgaactccg | gtctcaactt | cctaggtctc | tactaacgcg | 1620 |
| tcactgcgat | tcgaacccgg | tgtctcaact | ctgggacaga | gattttttaa | aaaaaattaa | 1680 |
| atTTaatatt | tttctcttta | cgaacaatgt | tggtgtttcc | ctttgttcta | tatgtgtata | 1740 |
| TTaacacctt | cattttttatt | tattaaattt | ttatgaaaac | ccaagagcga | agccgtcgtg | 1800 |
| tatatcaacc | ttactatctc | ttctaaacgt | accggggacg | cgttctactg | tatgtttaag | 1860 |
| cacttcacaa | ggtataaatt | tttttgtttt | ttatgaaaac | ccggaccgtg | acaccgagta | 1920 |
| cggacattag | gtttgtgaaa | ccctccgact | ccgcccgcct | aacgaacttg | ggcctcaac | 1980 |
| ctctggtcgg | acctgttgta | ccactttagg | gcagagatat | ttttttatgt | ttttaattgg | 2040 |
| tccacaccac | cacgtgcgga | cattaggttc | catgaaccct | ccgactccgc | cctcctagcg | 2100 |
| aactcgggtc | tccaacccgg | acctattgtc | tctggcagag | ttttttttaa | tttttaattt | 2160 |
| tttttttgaa | agacgttcta | cttcaactgt | atggaccctt | tatgtacact | gaactggttt | 2220 |
| TTaatgatat | ccacttttat | TTaaatcggt | tcaacgaaag | gatttatgtt | gggttttatc | 2280 |
| Tgacccttgt | cgatgtatga | caattaccaa | gggagataca | ctgtaagatc | ttttccgtct | 2340 |
| Tgatatccct | cccttttgta | gacaccaacg | ggtcctcgat | ccccaccctt | ctccctttaa | 2400 |
| Tgatgtttct | ccgtgcttct | ttgaacaccc | ggtctcgata | aaaccagagg | caaaaccact | 2460 |
| acatatatgc | aaacgggtct | aagtgtcttg | acgtgtgact | tctttctacc | taaagtgcct | 2520 |
| tacacttaat | atagagttgt | ttgaactgaa | gttttttgtc | tagctctttt | ctactaagat | 2580 |
| aagggttttt | ccccctcccc | ccttctagta | atatatccac | tcacaagtaa | atttagtctc | 2640 |
| atgctctaaa | taggcacttt | tagcgtcacc | tcgcttggtc | cccctacgac | tatggctgga | 2700 |
| ggaccaacct | ttcggaacat | tcgtcgcgc | tactgtcacc | ttgtcgccca | gtccgccacc | 2760 |
| cgcggactcg | ctccccgatc | tcgcctcacc | cgcccgcctc | gttcggagcg | tcggaccgcg | 2820 |
| cccggagccg | tgtcctcgac | cgacgccctc | gggcggcagg | actcagcgtc | cggctcctct | 2880 |
| gtcactcacg | cgcgggactc | agcgtccggc | tctctgtca | ctcacgcgcg | ggactcagcg | 2940 |
| tccggctcct | ctgtcactca | cgcgcggggac | ccgcggggcg | gggtcggggg | tcggggaaagg | 3000 |
| gacccggggg | cgttccgccc | ttgcgctcgc | ggagggggct | cgacacagag | ctctggaaac | 3060 |
| aggagggggg | tggggagccg | ggcgacggac | gggaaatgac | cgggggaggg | agtacgggca | 3120 |
| gggagtcgtg | ggagaggaaa | gttgattgaa | agggcgaggg | ctgtcaccga | cgtgaagcac | 3180 |
| tgcgactcta | tgtcttcctg | cacgtccact | ctcgacatcc | cggaccttac | cgggttcacc | 3240 |
| tcggatccga | ttaccttcag | accggaccgg | gcgtgggaca | gggggcccctg | aggacctcag | 3300 |
| ccccatcccg | tcccagatcc | gaagctggaa | aggTcccttg | actccagccg | gttcacctcc | 3360 |
| acctccacca | ctgcctcggg | agcgcgacgt | cagtgtcgag | aagagggaga | gatggggagt | 3420 |
| gaggtgacac | cctgcgaccc | agtctggatg | atgcccgtcc | acgacttctc | tagccgtctg | 3480 |
| gaggtctggg | tgccgacaca | gtggtgtcgg | tccggccagg | ggttcgtgta | ggcccttcgg | 3540 |
| aacgtttttac | atgtgcttct | tcatcgggat | tccatctcac | gggacacgac | aggggtcctt | 3600 |
| ctgggggttg | tcgtcaaaaag | ggttttctat | tactacgtcc | agtgatccct | taattgggca | 3660 |
| tcggtgggtg | ggtagtcgaa | cggaacagat | aacattttta | ggatttagag | tcgtgggtag | 3720 |
| tagaatgacg | agattcttg | aggctactca | gaccgcgcgc | gtcactcgga | catcagggtt | 3780 |
| cacgaaccct | cgactccgt | ctcctagcgc | actcgggtct | tcaatgtccg | acatcacacg | 3840 |
| ctaggcccta | cacttatcgg | tgacgtgagg | tcgaaccagt | tgtatcggtc | tacgtagaga | 3900 |
| ttttattttac | gcataaaatt | tttttaacgg | atTTTTtttc | ttggaggtcg | cacttgtgag | 3960 |
| acatcaggga | tgggtacgag | tgtcttatgt | cagtgtgagt | gacctagacg | gtaagttcta | 4020 |
| tacgcgtcaa | gtcgtgggtg | attagttgga | accgggaaaa | ctgggaaggg | aaggagttag | 4080 |
| gtagtcgtga | cggacgggtc | ggccgtcagt | ggttaaacct | tccagaaggg | aaaagaaaaa | 4140 |
| ggaagggttg | ggacgcgtag | gtcgtgggtc | gacgacaggg | tggatgacgt | acctcggaag | 4200 |
| agattaggaa | ctcgcgggag | aagggttttg | acggtgtcgt | gagacagtga | gccagacagg | 4260 |
| catttagtgc | ccttcacaaa | agacacgtgc | tacaaaatag | agcggagagt | ttatgtggat | 4320 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gcgcccgc | tcgccaccga | gtgcaggcag | tagggctcttg | aaccctccgg | ttccgtccat | 4380 |
| ctagtgaact | ccagtccttca | agttctggct | ggaccagttg | tatcactttg | ggacagagat | 4440 |
| gacttttatg | tttttaaatcg | acccacatca | ccccgtgcgg | acatcagggg | cgatgaaccc | 4500 |
| tccgactccc | tctctcttagt | gaacttgcac | cttccgcctc | cagcgtcact | cgctctaac | 4560 |
| acggtgacgt | gaggtcggac | ccgttgctctc | tttttgagtc | agttttgttt | tgttttgttt | 4620 |
| tttttccggc | cccaccacc | gaatacacag | attagggctc | tgaaaccctc | cggtccgcc | 4680 |
| ctcctagtc | tccggtcctc | tagctctggg | aggaccgata | gtaccacttt | ggggcagaga | 4740 |
| tgatttttat | gtttttataa | taggcccaca | ccgccgtgcg | cggacatcaa | ggccgacgac | 4800 |
| ccctccgact | ccgtcctctt | gccgcacttg | ggccctccgc | ctcgaacgtc | actcgactca | 4860 |
| agctcgggta | cgtgaggctc | gacccactgt | cccgttctga | ggcagagttt | tttttttttt | 4920 |
| tttttttttt | ttttttttta | atcggctctc | accaccgtcc | gcgagcatca | ggatcgatga | 4980 |
| gccctccgac | tccatcctct | taccacagtt | gggcccctcc | cctcgaacgc | cactcgactc | 5040 |
| tagcgcggtg | acgtgaggct | ggacccgctg | tctcgtctga | aggcagagtt | tgttttgttt | 5100 |
| tgttttgttt | tgttttgttt | agttttgttt | tttgccgata | ccctgtcttt | ggaatgtaaa | 5160 |
| aaaggagtta | ttgatcgctg | caggaccctg | acttaactct | cgagtcgatt | actaatttac | 5220 |
| ataaataagt | tgtgtaataa | aataaaaata | ataaataaaa | actctgcctc | agagtggagac | 5280 |
| aggggaatcc | acctcacgtc | accgcggtag | agacgagtg | cgttgaggac | ggaggaccca | 5340 |
| agttcggtaa | gaggacggag | tccgagggct | cctcgaccct | aatgtccatg | gacgatggca | 5400 |
| cgggtcgcact | aaaaaaccat | aaaaatcatc | tctgtcccaa | agtgatacaa | ccggtccgac | 5460 |
| cagaggttga | ggaacggagt | tccgtaggcg | gacggaactg | gagggtttca | cgacactaat | 5520 |
| atccgcactc | ggtggcgcgg | gtcggacttg | tgtataaaaa | tctaccgaat | acttcagaat | 5580 |
| cacggatcgt | gtacgggttg | ttatgacacc | atttcgtcta | tgtcagggtc | ggaagtacc | 5640 |
| acaggtcaag | tcacctctga | ttttagtctt | tcatactcac | ttactacgtt | ctttcttcct | 5700 |
| tccttccttc | cttgccctccc | tccctccctc | ctcccttcat | acataattcta | aatcaccaaa | 5760 |
| gtacagaatg | tcagagggtcc | cttttttata | cacaaaagg | aaagggtcta | taataccgac | 5820 |
| accagaccac | tagggactcg | tagatctttt | gacgacctaa | aacctagacc | catcaccttc | 5880 |
| accgtctcta | acgatacatg | aatcggtcga | ccaaccactt | tttcctgtgc | actgacctta | 5940 |
| tctgtactgg | tttccggtcc | actccgtact | aaaccttctg | ttcctctttt | tctaagagtt | 6000 |
| ttcgtaataa | actttttatt | tcaacaaaag | aagcaccgag | aagttcctat | taaattcttt | 6060 |
| cgaagatcaa | tcgttacgag | taaacacggt | gatcacgaag | gacagaacct | ttgactattg | 6120 |
| aacttgtaa | tccccaaaga | gacccgcttg | tgttctcagc | ctccaaacga | gactatactt | 6180 |
| atagcactgc | tatctcacct | gaaactagaa | agggaagaac | gacggtagat | aggactttct | 6240 |
| aaaacaataa | cttactcctc | aaataagttc | ggtttgacgt | gcccgtcgtc | cctcaaatac | 6300 |
| agggtccaac | atcatatagg | atgcacaggt | gtccttagaa | catacaaata | ggttttatta | 6360 |
| gatccccctc | atataagaca | atcactatcc | tttaaaaatc | ctttttcaac | acataaaaaa | 6420 |
| agttttacaa | tagttttgat | ataaaaagaa | tgaaatccac | cttcaccgac | ttttcataga | 6480 |
| actgatagt | taccttttta | taccgaaggt | ccgtagatta | cactgaaaat | aagtaccgat | 6540 |
| gtaactcttc | aacctctctc | gaccttagtt | cttactctcg | gtactataac | aacacatcca | 6600 |
| gatataagaa | tgacaatact | gatatcgggt | aaaagaaata | ataataataa | taataataac | 6660 |
| tctacctgag | agcgagacag | tgggtccggt | ctcacgtcac | cgggttacag | tcgagtgtct | 6720 |
| ttggagacgg | agggcccaag | ttgactaaga | gaacggagtc | ggagagttca | tcgaccctaa | 6780 |
| tatccgtgtg | cgatgggtga | ggtcgattaa | aaaatttaga | agaaaatcat | ctctgtccca | 6840 |
| aagtgggtaca | accgggtccga | ccagagtttg | aggactagag | tccactaggt | gggcgaagg | 6900 |
| ggaggggttt | acgaccctaa | tgtccacact | ccgtgacacg | agtcggggag | aaaggaaaac | 6960 |
| ttgtgtctct | acagtgtata | tgacaaaacg | cttaactgag | agtaaatccc | acaatttgat | 7020 |
| ttgaatcgta | ccgaatgatt | accctctctc | gaccaaactc | gacgacctcg | agtggtcgtc | 7080 |
| gtcttggtg | gtctggttct | cccttgaatg | aactttgaat | tgggtgttgg | ttacttgggt | 7140 |
| tttctgggtc | tcttggtgat | tcaaacgagg | atgttatgta | cgactggaca | tagaaagtat | 7200 |
| tataaaagta | ccattttaata | tcctaagata | aaggaaaaaa | gggagttcaa | caataacagt | 7260 |
| ttagtacggg | ttcactgtcg | acggaaactc | cttgatcggg | acaaatgcac | ttcgtattct | 7320 |
| ttacgggaaca | cggccgggtcc | acgccaccga | gtgcggatat | tagggtcgta | aaaccctccg | 7380 |
| gctccgtcca | cgtctgtctc | cagtccttaa | ggctctggtc | aacttggtgt | accgctttgg | 7440 |
| ggcagagatg | atttttatgt | ttttaatcga | cccacaccac | cgtgtacgga | cattaggggtc | 7500 |
| gataaatcct | ccgactccgt | cctcttagtg | aacttgggcc | ctccgcctcc | aacgttactc | 7560 |
| ggctctaacg | cggtaacatg | aggtcggacc | cgttgctctc | actttgtagg | agagcccttt | 7620 |
| tttttttttt | ctttctttac | ggaacacgtc | atccgtagac | cagactccaa | agtagaacia | 7680 |
| tgtaccactt | gtagtctctg | ctttgttcat | tcttagtagc | gactacaata | aaagacgtgt | 7740 |

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|-------|
| aagtttgaac | gattgttaaa | taactctaaa | attcgtgaga | cagagactag | aacccttttt | 7800 |
| cgaatcaact | tccgtaactct | ttctctcctc | cctccgccat | tcttacccca | tcgaaactgt | 7860 |
| cttgccaccc | ttggtggaaa | tcccagactt | tcctaaacgt | ctagagactc | acaacacttc | 7920 |
| taaacgagct | gtaaagtaga | caagagaaaa | tctagtttga | cacaataatt | ggaacacgga | 7980 |
| ctatttgttg | ttcacgaagt | cctccgtata | gcccacgact | tccactcctc | ctctcactct | 8040 |
| atttaataga | aacttgtagt | cattctcgac | tacccaattc | agaacaaaca | aggggggaact | 8100 |
| tgattctcga | gtttgagaga | attaaatagg | taatttactt | attccccacc | gtttttcccc | 8160 |
| ttccccgtcc | ttatggggcc | tataccta | gaaagggaga | atccaacggt | ttccatcatt | 8220 |
| taggctccac | tgtcaacagt | gacttacaca | attccataaa | cgaagaact | gacagagagg | 8280 |
| ataaacgacg | acatgtacta | ggatcttctc | gtagacacct | cgatatcctt | agaaacgtga | 8340 |
| ctgatgatta | ctaacgaaac | ttatatgaga | gaagatcgta | catgtcacia | agagtcacca | 8400 |
| agactaaaga | atagacagta | ctaaagtcta | gaaaccttct | aatgtcttct | accttgaaaa | 8460 |
| tgtaattgat | gaacgatttt | cctttcgaac | gtcctcgagg | tgtcggaagt | aacatagtag | 8520 |
| tctacacata | gaagtactat | catctacttt | ataagtcggt | ccacgccatc | gagtgtggac | 8580 |
| attaggggtca | cgacaccctc | cggctccgcc | cgtctagtgg | actccagtcc | tcaaaactctg | 8640 |
| gtcgaaccgg | ttgtacctct | ttgagacaga | gatgattttt | atgtttttta | tcgaccacaca | 8700 |
| ccaccacgca | cggacattag | ggtcgaggag | ccctccgact | cctacctctt | atcgaacttg | 8760 |
| ggctctcagt | ctccaacgtc | actcggctct | agcaggtgta | cgtgaggtcg | gacctctgt | 8820 |
| ctcgctctga | ggtagagttt | tttttttttt | tttttttttc | taagatcgac | ccaccaccca | 8880 |
| tgtacggaca | tgaggggtcga | tgaacctacg | actcggttct | cctaacgaac | tcgagacctc | 8940 |
| aaacacacgt | cgaacctggt | atatcacact | agtgcaggag | atttttttac | aaaaaaaaaa | 9000 |
| actctacctc | agagtgcagc | gacaggtccg | acatcacgtc | accgtcctaa | agtagagtga | 9060 |
| cgttgaggag | ggaggaccca | agtttgttaa | gaaaacggag | tcggagggat | catcgacctt | 9120 |
| gatgtccgca | cacggtggta | cgggtcgatt | aaaaacatga | aaatcatctc | tgttctaaag | 9180 |
| tggtataacc | agtcgcgacta | gaacttgagg | actagagtac | tagacggagt | cggaggggtt | 9240 |
| cacgacccta | atgtccgtac | tcggcgacac | ggaccgggtt | taaaaaaaaa | tttaactgtt | 9300 |
| gtctaaaaac | tctaaaaacc | aaatgtttcg | acagtatctt | gagtttatgt | ttatagatat | 9360 |
| atctttacta | aattactaaa | tcactacaga | aacaatcata | cagtaaaatg | tgcggtcaag | 9420 |
| tgatagaggt | ggttttttaca | tgaatatttt | ccatctttgt | gataatatct | tagatctaga | 9480 |
| gggtccaaag | tccaaaaaact | ttaatcgatt | tattttacaa | ttcaaggact | agtgcagtaa | 9540 |
| cggaatgtaa | aattcctatt | ataaaatttc | tattttacac | aacaatatct | tcatttattg | 9600 |
| ttgtaatggt | tttcaatata | aaaaattatc | tttaccocag | aacgacagtg | ggtcgcacct | 9660 |
| tacgtcacag | tgatagacat | ggggagattg | aggactcaat | ctccccaggt | ctatcactgt | 9720 |
| gagtgcacatg | ggagattgag | gacccgagtt | tgttaggaga | actcatcgat | cctgagggtcc | 9780 |
| gtgtacggtg | gtacgggtcg | atcaaaaatt | taaagatata | ccctctctcc | cagaacgaca | 9840 |
| caacggttcc | gatcagagtt | tgacgagagg | aggctcgttcg | gaggggtgaag | ccggaggact | 9900 |
| cagtaaccct | aatctccgga | ctcggtagta | tggaccgttt | caatatgata | agaattctct | 9960 |
| attttctaat | acttatgact | actataggag | acaagatggt | actggacccc | gacgaaaacc | 10020 |
| aagtctaacc | gattttttaa | tttacattca | ttggactttt | agaaataaat | cctctgtctg | 10080 |
| tgagaatctt | acactaaaat | aatggacaac | ctattcgggtg | accctccttt | tttttggaac | 10140 |
| cgtgaactga | taactaacat | tgatttctcc | gtcgacgata | aacaagtgtt | tcccagtcga | 10200 |
| atttgtaacg | ataactaaaa | atttaaacta | aaacaagggg | ataaggaaaag | aaacaataca | 10260 |
| ccccagttac | attagtaatt | agtagaacia | acctgattat | acggagacaa | agtcgtacca | 10320 |
| cccctcaata | taaagtcact | gcagatatgc | tcggaacttg | acggctcttct | ttagtcctgt | 10380 |
| gtgtttcaaa | atacccccac | cactaaaaaa | aatcaaatca | taattccgtc | taccaacatg | 10440 |
| tacacgtctt | gaggaaagac | gattatcggt | cctactccga | tatactctag | tgtaccccaa | 10500 |
| tccggtactc | cggttccaag | gtaagaagga | gacggtaagt | tttactatc | ccgaaacctc | 10560 |
| tcaaattaag | tagagaaact | caatagcaaa | aggtttaaca | ttttacattt | attattatgt | 10620 |
| tagacggaat | atcccgcaca | tacttcta | ttacctatt | tcttaccctt | tttatgaaac | 10680 |
| ttttgagatc | acacctttac | tctgtttaac | aagggttcga | ccacaggaga | atcaggggaa | 10740 |
| tacaagagta | gtaataaacac | aagaaataag | gaaataatag | taaaattatc | agaccttcaa | 10800 |
| ctctattttac | gtacgaaaag | tagtcagata | cttttagttt | caagaataag | aattttatta | 10860 |
| taattgaaat | aagaatgata | cattattatt | tatccatggc | aattgttcaa | cctttcacgg | 10920 |
| tttttttttt | ttttttttct | tttttaatga | ttcgacctgt | gtcacctgtg | gtggacattg | 10980 |
| gggtctataa | accctccgac | tcagtccctc | taacgaactc | ggatccctca | gtccatgtcg | 11040 |
| gaccacacgt | atcatttttg | gatagagaat | ttttttaatg | aatattagta | tattgggtca | 11100 |
| ctattgaaga | aaaaaaaaaa | aaaaaaaaaa | actctacctc | agagcgagac | agtgggtccg | 11160 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| atctcacgtc | accgcgtag | aaccgagtg | cggtggaggt | gaagggccca | agttcactaa | 11220 |
| gaggacggag | tcggagggtt | catcgaccct | aatgtccacg | tacgggtggt | cgggtcgatt | 11280 |
| aaaaacataa | aatcatctc | taccccaaag | tgacacaacc | ggtccgacca | gaggttgtgg | 11340 |
| actggagtag | tagacgggtg | gagccggagg | gtttcacgac | cctaattgtcc | gtactcgggtg | 11400 |
| gcgcgagccg | gatactaaat | aaaaaatatg | atgaaataag | tgtattgtca | cgaaaagtct | 11460 |
| tacaccgcat | gacgtatgta | cttataatac | gaacgtcgac | tcatcttggt | taggtgggtca | 11520 |
| ctcacaggac | ttcttaccaa | ggatctctgg | tagtcgatcg | tgtgggtcag | aattgggtacc | 11580 |
| gaaagatctg | gaacctccct | acgagttcaa | tcgaagatga | cgatcctaga | tacaaaattg | 11640 |
| attatggtac | aggattaatt | aatatatctt | cttatcaagg | gaattatgac | ataattcaca | 11700 |
| accgaccaga | cacaaaaaaa | caacaacaaa | caaaaaatcc | actcacagac | ccaccacgaa | 11760 |
| atatgacctt | ccttgaacga | caggaacgag | ttttttaacc | caagacggga | ggtgcaaacc | 11820 |
| agtgcgggtt | agagtaattg | taagttttgt | tccttgacct | ttctcaatag | ccattctata | 11880 |
| ctgtctgtcg | tccctgataa | tattgatgtc | gaacttacta | actttacacc | actaatcatt | 11940 |
| cattgaagac | ttcctcagag | taactcccta | tgaaagacaa | tagaccttta | tcgatagaac | 12000 |
| ggaggacatg | ttaccattgg | ggggttttta | aaactataaa | ttatttcgtg | aaacttcagt | 12060 |
| aagtcattta | tctcacttca | cgagtctttc | tattgactac | tgtacgttcc | ttcttttagt | 12120 |
| agaaatattg | cacaaacgag | gaacagacga | ctcgttccgt | tgttgacccc | ctcacgacct | 12180 |
| ctacttggca | cttattttaag | ataaaaaatcc | actgacagca | aaacaaagac | gttgtaaagc | 12240 |
| ggagaagttt | gtgagattct | gtcctgggtg | gttctctacg | gttcaataaa | tgttacctcc | 12300 |
| ttaatgtcct | gtactttttc | ttgattacaa | actacggtta | aatgttaa | ttcatttatt | 12360 |
| ttgttaaagg | tactgaagac | cataagaaag | acgagaacgg | gaacgaggtc | gatagaaaag | 12420 |
| aactgaaacg | taacggaggg | taaaaagacc | acaaccaa | aaacacacac | acaaatttac | 12480 |
| atacacacac | aaagttcacc | tcattttttc | gtaaaaaagg | ggttatgaat | aaataaataa | 12540 |
| ctgtcccaga | gcgagacagt | gggtccgacc | tcacgtcatc | gtgtagtat | caagtgcagt | 12600 |
| cggactggag | gacccgagtt | cgctaggagg | gtggagtccg | aagactcatc | gatcctgatg | 12660 |
| tctgagtagt | ggtgtggacc | gattataaac | ataaaaaaca | tctctacccc | aaaacggtac | 12720 |
| aacgggtctg | accagaactt | gaggacccga | gttactaca | cgggtggagt | cggagggttt | 12780 |
| cacgacccta | atgtccgcac | ttggtggcac | gggtcgggag | ttataaataa | tattttttaca | 12840 |
| aaaaccggtc | cacgccaccg | agtgtggaca | ttaggatcgt | gaaaccctcc | gactccgtcc | 12900 |
| gtctaatagga | ctccagtcct | caagctctgg | tcggactgct | tgtaccgctt | ttgggtagag | 12960 |
| atgattat | ttatgttttt | aatcggcccg | caccaccacc | cacggacatt | aggggtgatg | 13020 |
| agacctccga | ctcgcctc | ttaacgtact | tgggccctcc | acctccaact | ccactcgact | 13080 |
| ctagtacggt | aacgtgaggt | cggaccggtt | gtctcactct | gaggtagagt | tttttttttt | 13140 |
| ttttttttct | tcaaaaactt | atgtcttttc | aattatcatg | ttacttatgg | gtgtatccgt | 13200 |
| aatggatata | aagtcgttaa | ctcttgtaaa | aagggtacaaa | cacacaaata | tacacatata | 13260 |
| tatatatata | taaataaacg | actcggtaac | ttttattcaa | cgtctataat | actgtaaaaat | 13320 |
| gggaatttat | aaagtcgtac | gcagggtatc | cttacattat | agggagacgt | attagtgtta | 13380 |
| tggtaatgtg | tggattcttt | tgaaaaatgt | tcttcggagt | aagtctgtaa | cctaattatc | 13440 |
| ccgatatctc | ttcatcctac | cttttctcat | cctcatacat | gttatcataa | agttaacaaa | 13500 |
| ttaacacagt | tccttaattc | tttaaaatta | caacctacta | ccgtgattaa | ccgtaaaaat | 13560 |
| gacgggacac | gtatcattct | aaacaaaaga | gttttacctt | ttcaagtccg | aaaccttagt | 13620 |
| ctatggaccc | aagtttaaga | ccgagataat | aataacaaaa | aataaaaaaa | aagacttaca | 13680 |
| gtgatctgtt | tgaaaataac | ttcgtattta | acaccatgtc | tttatgtaaa | attgactaaa | 13740 |
| ttcagggtgt | ggtcactttc | ctctctaata | ccgtgggttt | gaaagggaaa | ggatagtatg | 13800 |
| gtactaaatc | taatactacg | ttagatgtaa | agagaaaaga | tccgaaacag | ggtatgttta | 13860 |
| aacccgtcaa | aaagttgtaa | tcttaaagtt | gtaatcttaa | gaattaagat | aatccttttt | 13920 |
| ttcgttggtt | ttttgggtctg | gagttcagtt | gttttagataa | cctataacaa | atacttgctt | 13980 |
| cagggtgcaat | tcgtaaccag | gagttttgtc | tcgaggaggt | ttataatcca | cgacacgagt | 14040 |
| aatgtcttag | tttgactagt | gtgactaact | tttgaaggag | ttactttaaa | agtttagttgt | 14100 |
| tgtacgaagt | ttattttcag | tttgtcacaa | ggttgggtgaa | ctgaagtttg | gttcatctaa | 14160 |
| aatccaaatc | tttgtgattt | ttttccacaa | agtaaatatt | tatgtcttcc | ttgtttttgt | 14220 |
| agtgcgtag | ttaggtcttt | aatagtttta | taaatctcct | gttctttata | ttttaaatca | 14280 |
| gltgaaacga | cgaaagagtc | aaggaatttt | aggggtctcat | agacgtttat | atcgattttt | 14340 |
| catgggtgag | aactttcgga | tataatgatc | agtaaagggt | aactcataaa | accttaaaat | 14400 |
| aaatacaaga | tgaataaata | agtacataag | acgaaatact | acaaatagac | ttattagacc | 14460 |
| tgtttaagag | taagaccctg | cagtaagcaa | agtaggatac | ttacggtacc | actccctttg | 14520 |
| tcacatcaat | ctccttgtct | acttcagttc | tgtgagtgt | cgtagtgcca | gtgtcttgaa | 14580 |

| | | | | | | |
|-------------|--------------|-------------|-------------|-------------|-------------|-------|
| attcagtgtt | ctgtcttttc | tttagctaag | acgaaaccta | gtttcaaata | tcttgtgatg | 14640 |
| aattaccttt | gatcaccttt | accgacgatt | tccttttcaa | ttccacttac | taggttcgac | 14700 |
| tgaactaatg | acttaggtct | tgttttaata | cgatttagag | agaccattaa | ttgattttatt | 14760 |
| tttagtaaaa | tatgataata | aatcattcaa | tcatttccgc | acgatgagta | atctacgatt | 14820 |
| agagtaaatg | actccttggtg | tcttaacata | tacaaaagac | cgagataata | aataatgaac | 14880 |
| ccatttgaac | ttgttcagtg | gttttaagca | acccaatgtc | aaacaagatg | acatttttcgt | 14940 |
| ccctattatt | atgaatgaaa | cgtcttaaaag | atattcctaa | tcgttattac | atcgttttgt | 15000 |
| gacccatgta | tgacgttcaa | gtcacttttc | ttctatgaca | gtaataaaca | aggttttcac | 15060 |
| cttcttgaat | gataattata | aagtaaaaaag | actaaataaa | taaatagata | aaatctctgt | 15120 |
| ttcagagaga | gacagtgggt | acgacctcac | atcaccgtgt | cagtatcgag | tgacattgga | 15180 |
| gtttgaggac | ccgagttcgc | taagagggtg | gagtcggagg | gttcatcgac | cctgatgtcc | 15240 |
| gtacacagtg | gtacggaccg | attaaaaaat | aaaaataaaa | aaacaaccac | tctgtccaaa | 15300 |
| aaaaaaaaaa | agaaaaaact | ctggttcaga | gcgagacagt | gagtcggacc | tcacgtcacc | 15360 |
| gggctagagc | cgagtgcagt | tcgaggtgga | gggccaagt | gcggtaaagag | gacggaatcg | 15420 |
| gagggttcat | cgaccctgat | gtccacgggc | tggtggtgtg | gccgattaaa | aaacataaaa | 15480 |
| atcatctcaa | ccctaaagtg | gcacaatcgg | tcctaccaga | gttagaggac | cggagcacta | 15540 |
| ggtgggaggga | gccggagggt | ttcacgaccc | taatgtccgc | actcgggtgt | gagggccggt | 15600 |
| tctgtccaag | aatataacgg | gtccgaccag | aacttgagga | ccggagtctg | ttaagagggt | 15660 |
| ggagtcggag | ggtttcaacg | ttcgtacaca | gtgacacgga | ccgaagaaga | ctaaaaaaac | 15720 |
| cagatttatc | gtagaggtct | aaagaaaaaa | aaaaaattaa | attttttaca | taaataaaga | 15780 |
| aataaatctg | tgtccagaa | cgatacaacg | ggtgtgaccc | catgtgaccg | ataagtgtcc | 15840 |
| acattcgtat | cgggtgatat | cagaacttga | ggaccggagt | tccctaggaa | ggtggagtcg | 15900 |
| gaaggttcag | accctgatgt | agaccgattc | gtagaagttt | aaagaataaa | taaataaata | 15960 |
| aataaaaaact | ctacctcaga | acgagacaac | ggatccgacc | tcacgtcact | gagtttagagt | 16020 |
| cgagtgcagt | tggagacgga | ggacccaagt | tcggctaaga | ggacggaatc | ggagagctca | 16080 |
| tcgtccctaa | tgtccgcaca | cgggtggtgtg | ggtcgattaa | aaatataaaa | ataatctctg | 16140 |
| tcccaaagtg | gtacaaccgg | tccgaccaga | gcttgaggac | tggagtccat | tagatgggcg | 16200 |
| gagccggagg | gtttcacgac | cctaattgtcc | gcaactcggtg | acacggggccg | acgtagaagt | 16260 |
| ttaaagaatt | tatgaggaac | catatcacct | cgggaattac | gaaaagtgat | tacgtgacga | 16320 |
| ggaactacac | gacggataag | gtcatctatg | tgtcttagtc | tcaccattcc | cggaaacttt | 16380 |
| ggtaactaaa | caagatcacc | gaaagttttt | ggtaaaaaatt | atgttaataa | aaaattcgtt | 16440 |
| ttacaaaata | tatatatata | tataccaaaa | aaaaaaaaaac | tctacctcag | aacgagacaa | 16500 |
| cgggtccgat | ctcacgtcac | cacgttagag | ccgagtgcag | ttggagtcgg | agggaccaaag | 16560 |
| ttcactaaaa | ggacggagtc | ggaggggtca | tcgaacctga | tgtccaccca | cggttgcgtg | 16620 |
| gaccgattaa | aaacgtaaaa | atcatctctg | tcccaaagtg | gtacaaccgg | tccgaccaga | 16680 |
| atttgaggac | tggagtccac | tagacgggtg | gagccggagg | gtttcatgat | cctaatatct | 16740 |
| acactcggtg | acacgggtcg | gtctttacgt | gaaatttttg | gtggtcagga | acggacccgt | 16800 |
| accaccgagt | gtggacatta | gggtcgtgaa | accctccgac | tccgcccacc | taatggactc | 16860 |
| cagtcctcaa | gctctggctg | gactagtgtg | actacttttg | gacagagatg | attttttatgt | 16920 |
| ttttaatcgg | cccgcaccac | cgcacacgga | caatagggtc | gatgagctct | ccgattccgt | 16980 |
| cctcttagcc | gaacttgggt | cctccgtctc | caacgtcact | cgactctaac | tcagtgcagt | 17040 |
| gaggtcggac | ccgttgtctc | gttctgaagt | agagtttttg | tttgtttgtt | tcttttttgg | 17100 |
| gggttatcag | gtttcgggat | taaaaggggg | gtaataaata | aaaaaattac | ccgtttaaaa | 17160 |
| tttttaacat | atatataaat | accacatgtt | accctacaaa | actgtatata | tatgtaatac | 17220 |
| cttactgatt | tagttctatt | aattttacgt | aatggagtgt | atgagtggta | aataaacact | 17280 |
| actctagttt | cagatgagaa | aatcgttaaa | agaaaaaaga | aaagaaaaga | aagaaaataaa | 17340 |
| gaaaaaaaaa | aaaaaaaaactc | cgtcttagaa | cgagacagcg | ggtccgacct | cacgtcaccg | 17400 |
| tgtagagacc | gagtgacgtt | ggaggtggag | agtccaagt | cgctaataag | acggagtcgg | 17460 |
| aaggttcatc | gaccctgata | tccacacacg | atgggtgtgg | tcgattaaaa | aacataaaaa | 17520 |
| tcactctctac | ctcaaagtgg | tacaaccggt | ccgaccagaa | cttgaggact | ggagtccact | 17580 |
| agggggacga | agtcggaggg | tttcacgacc | ctaattgtccg | cgctccacgg | gtcggaaaaat | 17640 |
| cgtaaaagg | tatgtaacaa | taattgatat | cagtgtgtaca | acataattatc | tagagaaatt | 17700 |
| gaataaggac | tattgacttt | aaaacatagg | aaattgggtg | tagataggac | aagggtgggga | 17760 |
| cgggagggtg | ggggatgggg | gtcggggacc | attctcggag | atgagaagtg | gagataactca | 17820 |
| agttgaaaaa | ctttaagggtg | tatatttagat | cgctccaata | cgtcataaac | aaaaagtcac | 17880 |
| ggacgtctat | actgtaaaaa | cccaagttga | aaaacaaaca | aaaactctac | cttagagtga | 17940 |
| gaacagcggg | tccgacctca | cgtcaccgca | ctagaaccga | gtgacgttag | aggcggagga | 18000 |

| | | | | | | |
|--------------|-------------|-------------|-------------|-------------|-------------|-------|
| cccaagttcg | gtaagaggac | agagtcggag | gactcatcgt | ccctaattgtc | cgcgagcggg | 18060 |
| ggcagcgggtc | gattaaaaaac | ataaaaaatca | tctctgcccc | aaagtgatac | aaccgggtccg | 18120 |
| accagagatt | gaggactgga | gtctgctaga | cggacgtaac | cggagggtttt | gacgacccta | 18180 |
| atgtccgtac | tctgtgacgc | tggccgggttt | gtaaaaaaat | tacgtattat | ctacatgtat | 18240 |
| gaaagtcccg | tgtagactat | taaattatat | aagtatatta | aacatgtcta | gttcagttac | 18300 |
| attgaccata | taggtagcgg | aatttgtaaa | cagaaaaaaa | ataagatcct | tgggtaaaact | 18360 |
| taataagaaa | agatcgataa | aactttatat | gttatctaata | aacacttgat | atcagtgagg | 18420 |
| tgactaggta | gcttgatc | cagaataaaag | aagaataatt | tgacctaaaa | catgagtaat | 18480 |
| tagttcgaga | gaagtaggag | gggtgagatg | gaccgcagac | cattgggtgg | tagatgagag | 18540 |
| ataatagtac | tccaggtgaa | aaaatcgagg | gtgtatagtc | gctcttgtag | attataagca | 18600 |
| gaaaaactcc | aaccgaataa | agagaattgt | attactggac | gtcaaggtag | gtacaacgac | 18660 |
| gtccactgtc | ctaaagggaag | aaaataaaat | aaaataaaat | aaaaaaaactc | tgtctcagaa | 18720 |
| tgagacagag | gggtccaacct | cacgtcaccg | cactagaacc | gagtgacttt | ggaggccgac | 18780 |
| gggtccaagtt | cattaagagg | acggagtcgg | aggactcatc | gacctgatg | tccgcgcacg | 18840 |
| gtgggtgtggg | ttgattaaaa | aaaaaaaaaaa | aaaaaaaaaaa | aaaaaaaaaaa | aaaaaaaaaaa | 18900 |
| aaaaaaaaact | ctgcctcaga | gcgagacagc | gggtccgacc | tcacgtcacc | gccctagagc | 18960 |
| cgagtgcagt | tcgaggcgga | gggcccgaag | gcggtaagag | gacggagtcg | gagggttcat | 19020 |
| cgacctgat | gtccgcgggc | gggtgatgcg | gccgattaaa | aaacataaaa | atcatctctg | 19080 |
| ccccaaagt | gcaaaatcgg | ccctaccaga | gctagaggac | tggagcacta | ggcgggcgga | 19140 |
| gccggagggt | ttcacgaccc | taatgtccgc | actcgggtgg | gcgggcccgg | tgattaaaaa | 19200 |
| cataaaaatc | atctctaccc | caaagtgtac | aaccgttccg | accagagctt | gaggactgga | 19260 |
| gtccactagg | cggacggagc | cggagggttt | cacgacccta | atgtccgaac | ccggtggcgt | 19320 |
| gggtccgggtcc | taaagggaaga | aaaagttcag | acttatcata | agggtcacaca | tgtatatgat | 19380 |
| gatgcaaaaag | aaataggcaa | gtagacaaac | tcagaagaaa | aaaagaatca | aatcgatttc | 19440 |
| taaataaaaat | aaaaaagttt | tttgattaaa | aagtaaaaaca | actagaagac | ataaaaaaat | 19500 |
| cagagttaaa | gtaaaataaag | acgacactac | aagaaaagaaa | ggaagatgat | taaaactcaa | 19560 |
| actaaacaag | aacgaaaata | tcaaggaggat | acccgtaatg | atccaacaaa | taaacttcag | 19620 |
| acaaggaaga | aagggaagtaa | ggaagggaag | agggaggagg | ggaggaggagg | aagaagggaag | 19680 |
| gaaggtaaga | aagaaaaaaa | aaactctccc | ttagagcgag | acaacgggtc | caacctcacg | 19740 |
| tcaccgcgct | agagtcgagt | gacgttggag | gtggaggggc | caagtctcgt | aagaggacag | 19800 |
| agtcggagggt | ttcatcgacc | ctaagtgtccg | tacgtgggtg | tgccggaccga | ttaaaaaaac | 19860 |
| ataaaaaatca | tctctgcccc | aaagtgggtat | aaccggtccg | accagaactt | gaggactgag | 19920 |
| acgggcccggg | tcggagggtt | tcaagaccct | aatgtccaca | atcggtaaca | cgggcccggga | 19980 |
| agaaaggaaa | gaagaagaaa | gaaagagtc | cagagtggag | cagtggaact | gacctcacgt | 20040 |
| caccacgtta | gtaccgagt | tcgtcgaaac | tggaggacc | gagtcggtta | ggaggatggg | 20100 |
| gtcgtagggt | tcacgcaccc | tgattccgat | ggtagcgacc | gactaaaaac | ataaaaagaca | 20160 |
| tctctgtccg | aaagtggtag | aacgggtcag | acgagaactt | gaggacccga | gttcgttagg | 20220 |
| tggacggaac | cggagggttt | cacgactcta | gaataaactt | tagaaagttg | aaaaaactat | 20280 |
| atccgtaatg | aacttttagaa | agatgaaaaa | actatatccg | taaataacga | tatttgaaag | 20340 |
| gagaatcacg | acgaagacga | catagggtat | ctaaaaacgt | acaacataaa | ggtaaaagta | 20400 |
| gacaaagtcc | tataaaat | aaaaagagga | ttaaagaagt | acctgggtta | ccgataagtc | 20460 |
| ctcgtacaac | aaattaaagg | tacacaaaca | cataaaagggt | tccaagaaca | ataactaaag | 20520 |
| attaaaaataa | ggtatcacca | ctctttctat | gaacaatact | acagatgaaa | agacttaaac | 20580 |
| aattctgaac | aaaacaccgg | attctatatc | agatacgacc | tcttacaagg | tacacgataa | 20640 |
| ctcgtcttac | agataagacg | tcgtcaactc | atctttacgag | acacttacag | tcgatccgga | 20700 |
| taaactcgat | catatatcaa | attacaaaga | aataataaaa | gacagaccta | ctagacaaaa | 20760 |
| tgactctcac | tccacaccac | aatctcaggg | gatgatgata | acgtaatgtc | atatagagaa | 20820 |
| gaaaatctag | ataattacaa | acgaaatata | tgaaacctcg | agggttacaac | tcacgtttct | 20880 |
| atgaatatag | aagaacgact | taactggggg | aatagtaata | tatcattgga | agaaacggag | 20940 |
| aaactgtcgg | aactaagtgt | cagacaaaat | agactacatt | catatcgatg | aggacaagaa | 21000 |
| aaaaccaaag | gtcaacgaac | cttacagaaa | aaaggtgggg | aattgaaggt | cataaaaaata | 21060 |
| ttcattttcat | ccaaagaaca | tccgtcgtat | attaaaccag | ggtaaaaaaca | taggtaagtc | 21120 |
| gggtgagataa | ggaaaaaaa | cccccccaa | gggttcaaaa | taagttcttg | agtatgggtt | 21180 |
| ataaggtcta | tttattttaa | aatagaagtg | gaaggaggag | aagaaaaagg | tccaattaga | 21240 |
| ccttaattgc | agtaagtatt | attgagaaaa | acgacaatcg | ttgatgtgtg | ttgttttagtg | 21300 |
| tatctaataa | gaagttttata | aaaaaccact | ctataaagtt | tatggaaaac | ctttttccat | 21360 |
| ggagtcttca | gtgtcactag | aacgacaacg | aggaaagcta | ccaatattac | gagggtgggtc | 21420 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| taagggtcga | aaaggttaagt | gaaattagga | gagaacgttt | ttgacgagtt | ttaaccgtcg | 21480 |
| tagatactaa | ggtaaaagat | gttccacca | tgctcagttct | cacttgtagt | attggacgaa | 21540 |
| gaaaaaaacg | gagagaaacg | gtgttcgaaa | aagtgtcgtg | atacggagaa | ttaacctctt | 21600 |
| aactcaggta | aatgtaaatc | acaataataa | ctatgtattt | ctgaattgta | aaaaaattta | 21660 |
| actatgtatt | aactacatcg | ataaaacccc | gcaagtacac | tattaaatta | tgtaagtata | 21720 |
| ttaaaccattt | ctaatttaaat | cacattaacc | ctatggatag | tggaagttat | aaacagaaaa | 21780 |
| gaaaagaaaa | aaaaagacac | tctacctcaa | aacgaaaaaa | acgggtccga | cctcacgtta | 21840 |
| ccgcgttaga | gccgagtgac | gttggagggtg | gagggcccaa | gttcgttaag | aggacggagt | 21900 |
| cggagggtc | atcgacccta | atgtccgtac | gtgggtgtac | gagtcgatta | aaacataaaa | 21960 |
| atcatctctg | ccccaaaatg | gtacaaccag | tccgaccaga | gcttgaggac | tgaggtccac | 22020 |
| taggtgagcg | ggaccggatg | gtttcacgac | cctaatatcc | gtactcggtg | gtgtggaccg | 22080 |
| ggacagaaaa | gaaatacaac | ctttgttaagt | ttaataagag | aagatcgata | aaactttata | 22140 |
| tggtatataa | taacatttga | tcagtgaat | gactatatag | tttgtgatcc | agaataaaga | 22200 |
| aagtagtttg | ggatatatat | atatatatat | atatatatat | ataaaaaaaa | aaaaaaaaaac | 22260 |
| tctgcctcag | agcgagacag | agcgagacag | cgggtccgat | ctcacgtcac | cgtgttagag | 22320 |
| ccgggtgacg | ttcgaggcgg | agggcccaa | tacggtaaga | ggacggagtc | gcggggctca | 22380 |
| tcgaccctga | tgccacgga | cgggtgtacg | ggccgattaa | aaaacataaa | aatcatctct | 22440 |
| gccccaaaat | ggtacaatcg | gtcctaccag | agttagagga | ctggaacact | aggtgggtgg | 22500 |
| agccggagg | tttcacgacc | ctaagtgtccg | aactcgggtg | cacgggccgg | tttgggatat | 22560 |
| aaatattggt | aattagttga | agagaaatag | agggggtaag | acatgggaaa | gaccggaaac | 22620 |
| cattgatagt | tatatgagag | atagaattac | tcaaggtgaa | aaaaatcgaa | ggtgtatagt | 22680 |
| cactcttgta | tactataaac | agaaagacac | aaacggaata | aagagaattg | tactggacgt | 22740 |
| caaggtacgt | agaacgacgt | ttactgtcct | aaaggaagac | aaaattttag | acttatcata | 22800 |
| aggtaacaca | tatatacgg | gcaaaaggag | taggtaagta | ggtaacgacc | tacgaatcca | 22860 |
| actaagggtat | agaaccaata | acactaatta | cgacgtcagt | tgtaatcctc | acgtctataa | 22920 |
| agggactgta | tgactaaagt | aaagtaagg | aaggggaagg | gacggacaga | cggacggaag | 22980 |
| gaaggaagga | aggaaggaag | gaaggaaaga | aggaaggaag | gaaggggaag | agggagggtg | 23040 |
| ggggggcg | gaaagtctac | cttagaccga | gacagcgggt | ccgacctcac | gtcaccgcgt | 23100 |
| tagagtcgag | tgatgttga | ggcggaggac | ccaagtctgt | taagaagacg | gagtcggagg | 23160 |
| gctcatcgac | cctaattgcc | gtacacggcg | gtatgggtcg | attaaaaaaa | cataaaaatc | 23220 |
| atctccgtcc | caaaatggta | taaccgggtcc | gaccagagct | tgaggactgg | agtactaggt | 23280 |
| ggacggagtc | ggaggggttc | acgaccctaa | tgtatccaca | ctcgggtggca | tgtgtcggtc | 23340 |
| aaagtaaaag | aaaagaaaaa | aaaaaaataa | actctgcctc | agagcgagac | aacgggtccg | 23400 |
| acctcacgac | ctcacgtcac | cgtgctagag | ccgagtgacg | ttcgagggtg | aggggcccaag | 23460 |
| tgtggtaaga | ggacggagtc | ggaggggttc | tcgacctgt | tgtccgcgga | cggtgataca | 23520 |
| ggccgattaa | aaaacataaa | aaaatcatct | ctaccccaaa | gtgacacaa | cggtcctacc | 23580 |
| agagctagag | gactggaaca | ctagccgggt | ggagccggag | ggtctcacga | ccctaattgtc | 23640 |
| cacactcgg | ggcgcggacc | gggtaaaaga | aatctatata | tgggttcac | cccctaacga | 23700 |
| cccagtatat | catcaagata | aaaattaaaa | aactccttag | aggatgaca | aagggtatta | 23760 |
| ccgacatgat | taaatttaag | ggtgggtgtc | acacattcct | aatcacgacc | actcctacac | 23820 |
| ctcttttgct | atgaagaccc | gtaaaaaaga | agataactct | gatttcaacg | ttgagaatca | 23880 |
| taaaaaaaa | tatgatggga | aatccttcca | ctttaacaac | ttcacctact | tctttgtcgt | 23940 |
| cgatagaact | tcttaagttc | taaacgagtt | ctaaaagact | agtctgggtta | acctctcttc | 24000 |
| aacggttgta | gacctccgac | aagacgaaac | ctcaatttcc | aatcaaaccg | aaagtgatgg | 24060 |
| actctcttga | taaaataaat | aaataaaaa | tctacctcag | agagagacag | tggtcttgac | 24120 |
| ctcacgtcac | cacactagaa | ccgagtgacg | ttggaggcgg | aggacccaag | ttcgtttaaga | 24180 |
| gggacggagt | cggagggcta | atcgattcta | atgtccgtgg | gtgggtgggc | gggccgatta | 24240 |
| aaaacacaaa | aaatcatctc | taccccaaag | cgggtacaacc | ggtccgacca | gaacttgagg | 24300 |
| actggagtcc | attgggtgga | cggagtcaga | gggtttcacg | accctaattg | ccgcactcgg | 24360 |
| tgacacggcg | cggtcatacg | taccagagaa | ctccgcgtga | agagaacgac | cagtttacaa | 24420 |
| caatctgcca | atatatggtc | aatgtgcgg | ggtaaaacgg | agaattacac | gtacgaactc | 24480 |
| gggtgaacgg | gttgagggtc | ctagaatagc | ccttcgacga | ctagtgggtca | aagtccacaa | 24540 |
| agacaaataa | ccctctgaag | gaaagggacc | atgacagaca | ctgattaata | ctaaaagctc | 24600 |
| tctgtcaatt | gttgggtggac | tagtagtgga | ttactagcgg | actgtaagga | ccacctcagc | 24660 |
| cgcgcccctc | gggagaggac | gggacgagtg | cggactgac | gataaatatg | acgaaattgt | 24720 |
| tcaagaggtt | ttaagtctct | ggaaagcact | cataagacta | aaatattatt | ttatcaataa | 24780 |
| acgtattcaa | atcattctca | gaaaagagag | ttttgtcctg | ttaacctctg | tgaaccaata | 24840 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| aaatgggtttc | gaaactgacc | ttattgtaaa | catccatttc | aaggtcgttt | cggttgaact | 24900 |
| ttttctcgat | agaccggttt | gagaacgacc | tgaagtacgt | ttactagtcc | gtttcaaatt | 24960 |
| attcggatttt | taaataaaac | gtgtatttaa | ccggaatgat | attaaacaga | aatcatattt | 25020 |
| tcctcctcga | cccacgtcct | caagtgtgag | tatttagggtc | gtgaaaccct | ccgactctgt | 25080 |
| ccgtctagtg | aactccgggtc | ctcaaactgt | ggtcgggaccc | attgtacaac | tttgggacag | 25140 |
| agatgggtttt | tatgtttttt | taatagaccc | ataccaccac | gtacgaccat | caagggtcaat | 25200 |
| gagttctccg | actctaccct | cctaacgaac | tcgggtccct | ccacctcccg | ttactcgggt | 25260 |
| ctgacgtggg | gacgtgagg | cggacccgtt | gtctcactct | gagacagagt | tttttttttt | 25320 |
| tttttttttt | tttttctttc | ttccgatctc | tctctttacc | aaagtttcct | tttgatattg | 25380 |
| tgaacaatga | tctaaagggtc | ggacctgaaa | acaaaaactc | acgtataact | tagtaattaa | 25440 |
| taaagaaccg | atgttattgg | gagatttcta | tttgggtccaa | tattaaaaag | aagtacaaaa | 25500 |
| atcaaacacg | ggattcacct | tatccaagga | ataagacaa | actgtgtgct | tatgagaaaa | 25560 |
| ctgacagtat | aataattaca | ataaatatcg | aggaacaaaa | tgaagggtttc | tttgggtcta | 25620 |
| gtactataag | attccaatct | cttagggggc | aaaccttagg | gtgaccagga | ttagacgaaa | 25680 |
| agtgacgttt | aaggcacgac | gatttttaata | tattcgtgag | aagagatccg | ggcccttgga | 25740 |
| tagtgtgttt | tccatccaca | cactctgaca | ttcccgggtca | aaactctctt | aataaagtct | 25800 |
| gagaggttta | gttttttacc | gtgtgtctac | gtatttgtcg | accattttat | ttcctgagac | 25860 |
| ggaggaccca | ataatacaca | caccgtggaa | aagtaggtag | ggtaggtatt | tcttaaagga | 25920 |
| cgaagagcat | cttacttttc | ttttaataat | gactctccta | tatttccatg | gagtacagtt | 25980 |
| tcggaggatc | caaattatga | gactcaatac | tctaaatacg | tctattgtat | atataaaaaa | 26040 |
| ttttaaaatc | ttgtccgggtc | cgtgtcaccg | agttcggaca | ttaggatcgt | gaaaccctcc | 26100 |
| ggttccaccc | gtctaaccgga | ctcgagtcct | caagttctgg | tcggaccctg | tgtaccactg | 26160 |
| tggggtagag | atgattttat | gttttttatt | taatctaccc | gtaccaccgc | acgcggacat | 26220 |
| cagggtcgat | gaaccctccg | actccgtcct | cttaacgaac | tcggggccctc | cgccctccaac | 26280 |
| gttactctgc | tctaactcta | ccgcgggtgac | gtgagggtcgg | accgttgtct | cactctgaga | 26340 |
| cagagtttta | tttattttatt | tattttattta | tttattttatt | tattttattta | ttaaaaatctt | 26400 |
| gtttaatgac | tttctgggtg | tttttttttt | gacatcgtgt | tgcccttcaga | gattttaagga | 26460 |
| atcgaatttt | ccaaaattgt | cacgaataca | aaacatatcg | attaacgaca | ttcagacatt | 26520 |
| gattttgggt | ctaattgtcat | cgtgttacgt | atcttcaatt | tctattcagt | taaaaaattg | 26580 |
| gagtggaaac | cgaaaaacaa | acaaccgaaa | atataattct | ttaaaattcc | caaataatta | 26640 |
| cggatagggt | taggtaagggt | tagaccggat | cttgaaagaa | aaaaaaccac | cccctccccc | 26700 |
| tgcctcagaa | ggagacagtg | ggtcggaccc | cactgcaccg | cactagagta | gagtgcagtt | 26760 |
| ggaggcgag | tgtccaaggt | cactaagagg | acggagtcgg | aggactcatc | gacattaatg | 26820 |
| tccgtacacg | gtgggtacgga | ccgattaaaa | aaaaagaaaa | aaaaaaaaaa | aaggctctac | 26880 |
| ctcagaacga | gacaacgggt | ccgacctcac | gtcaccacgc | tggagccgag | tgacgttgga | 26940 |
| gacggagggt | tcaagttcgc | taagaagacg | gagtcggagg | tctcatctac | cctgatgtcc | 27000 |
| acgcacgggtg | gtacggaccg | attaaaaata | aaataaaaaa | atcatctcta | ccccaaagta | 27060 |
| gtataaccgg | tccgaccaga | gcttgaggaa | tggagtacta | ggtgggtgga | accggagggt | 27120 |
| ttcacgaccc | taatatccgt | actcggtgac | acgggtcggg | attaagcata | aaaatcatct | 27180 |
| ctgtcccaa | gtggtacaac | cagtccgacc | agagtttgac | gactagaatc | cactggttgg | 27240 |
| acagagccgg | aggggtttcac | gactctaattg | tccccacttg | gtggtacgga | ccagaccgga | 27300 |
| tcttgaaagt | ttaagcgata | cacagaaaac | cgagattcgg | ggaactggta | tccccagggt | 27360 |
| ggttccgtgt | tctacctggg | tcccttccgt | cgacacgggtg | gggtcgttgt | gtcactctat | 27420 |
| tttattttca | aaccactgggt | aactacaacg | gagactgttt | agatccgggtc | ttacgcctct | 27480 |
| ttcatattagt | ttttattttta | agatccggcc | cgcgccaccg | agtgtggaca | ttagggtcgt | 27540 |
| gaaaccctcc | ggctccgccc | acctagtgtt | ccagtcctca | agctctgggtc | ggaccggttg | 27600 |
| tatcactttg | gggcagagat | gattttttatt | tttttagtcgg | tccgcacccc | cgtccgtgga | 27660 |
| catcagggtc | gatgaaccct | ccgactccgt | cctcttaagg | aacttggaac | ctccacctcc | 27720 |
| aacgtcactc | ggctcttagta | cgggtgacgtg | agattggacc | cgctgtctcg | ctctgaggta | 27780 |
| gagtttttta | ttttttttta | ttttttttatt | tttttttttt | attttaatat | ttgggagttg | 27840 |
| gtagacttgc | ctgggggagga | cagcccggtt | ccgtaacggt | tcaataggat | tttttgatca | 27900 |
| agtccagtgc | ttcccttcct | cttcaaacct | gtacggagta | ataaggagg | agggaaaaacc | 27960 |
| ttaagtctgt | gacgactgggt | cgtaattggta | attttgtcta | gaattctgac | tatcttgtct | 28020 |
| gagaaattta | gaccattctt | tgtaaatggt | agataagaga | gacatcggac | gacggatctc | 28080 |
| cgaagtagac | gtactatttt | ggaaccagag | gtgttagaga | atagtattgg | atctgtgagg | 28140 |
| gaagataact | aggggtccaga | aacctaatat | tgagttgggt | aacggttagt | gttttagaaa | 28200 |
| cttagacgga | cactggacct | ttaggggtga | aggtcaacag | ggtgcaaga | ccgacttgg | 28260 |

| | | | | | | |
|-------------|-------------|-------------|--------------|-------------|-------------|-------|
| ttacatgtat | aatatacata | actaactaca | gaatacacagag | agatttttaca | tatttttggtt | 28320 |
| caatatccca | ctggtgaaac | ccgtgtacaa | acgtctagag | gactcccgac | acagtgtccg | 28380 |
| gtaaccagtg | aataaaccga | gtcttattta | gaaaaattca | taaaatctca | aactgggaaa | 28440 |
| aacaactgtt | acaaattgta | ggatgtcaat | actgtgggat | taaacttaaa | tatgtcgaat | 28500 |
| tgaagttatt | gtatgatttt | aagacgagga | aatttcgaac | aagagttgat | aaaatcaaga | 28560 |
| aaaaaaaaaa | aaaggtaact | gtctcaaagt | gagatagtgg | gtccgacctc | acgtcaccgt | 28620 |
| gctagaaccg | agtgcgctcg | gagacggagg | acccaagttc | actaagagga | cggggtcggg | 28680 |
| gtgttcacg | accctaattg | ccacgcggtc | ggtggtacgg | accgattaaa | aaacataaaa | 28740 |
| atcatctccg | ccccagagta | gtacaaccgg | tccgaccaga | gcttgaggac | tgtagtctac | 28800 |
| taggtggctg | gagccggagg | gtttcacgac | cctaattgtcc | acacttgatg | gtgcggggccc | 28860 |
| agaaagatca | agaactatag | tgttttaata | cagaaataag | taaaacacgg | gggttttgca | 28920 |
| tttgattatt | aataaaattt | acgtaaccag | agaatttagt | acaccttttg | tttttcatct | 28980 |
| caatgtttgg | taacaatggt | attatgatcg | aaacggccca | caccaccgaa | tgcgggtggtc | 29040 |
| cactaggtgg | gtggatccaa | cgggtcggac | ccgttggtct | cgtgttgagg | tagagttttt | 29100 |
| ttgtttttgt | ttatttggtt | tttgggggta | ttatgggtcg | aaaaaaaaaa | aaactctgtc | 29160 |
| tcgaagcgag | aacaacgggt | ccgatctcac | gttaccacgc | cagaaccgag | tggcggttggg | 29220 |
| ggcggaggac | ccaagttcgc | caagaggacg | gagtcgaagg | gttcacgcac | cctaattgtcc | 29280 |
| acgcgtggta | gtgtcggccg | attaaaaaca | taaaaatcat | ctctgcccc | aaatggtaca | 29340 |
| accagttcga | ccagagtttg | aggactggag | tccattaggt | ggacggaacc | ggagggtttc | 29400 |
| acgaccctaa | tgtccgtact | cgggtggcag | ggccgggttag | ggtcgtgaaa | ccctccgact | 29460 |
| ccgaccgtct | ggtgaactcc | agtcctccag | ttctgggtcg | accggttgta | cgactttggc | 29520 |
| acagacatga | tttttatggt | tttaatcgac | ccgtgccacc | gtttacggat | attaggggtca | 29580 |
| atgaaccccc | cgactccgtc | ctcctagcaa | aactcgggccc | ctacacctcc | gacatcactc | 29640 |
| ggcactagtg | ttgtgacatg | gggtcggacc | cgtgtgtctc | ttctgggacg | gagttttttt | 29700 |
| tttttttttt | tcgtgtttcg | aaaaactctt | tagtgaaagt | ttttaccatg | taaacatcaa | 29760 |
| ccccttccaa | ttagcttgga | ttttatatct | ttaggacctg | gggttttgga | cctcgggtcat | 29820 |
| aatggtcgta | cttagattgg | gttcgagtca | tatgttcggt | ggacatctcg | atttctcact | 29880 |
| aaatgatccg | gcccgtgcc | ccgaatgcgg | acattagggg | cgtgaaaccc | tcggctccgc | 29940 |
| ccacctagtg | ctccagtcct | caagtctctg | tcggaccggg | tctaccactt | tggggcgagag | 30000 |
| atgattttta | tgtttttttt | aatcggcccc | caccaccgta | cgcggacatt | aggggtcgatg | 30060 |
| agggtctccg | ctccgtctct | taacgaattt | ggacctcccc | gcctccaacg | tcactcggct | 30120 |
| cttagcgcgg | gacgtgaggt | cgacccccct | gtctcactct | gaggtagagt | tttttttttt | 30180 |
| ttttctcact | aaatgaaaga | aacgaaataa | tttaagaagt | cgtgagacga | taagactgag | 30240 |
| aagacaacaa | gcttcttcca | ctatgaaacc | tttcatctgt | ctaaaccgaa | aactcataag | 30300 |
| ttaggtaatt | tgtaaagtgt | ttatacagtg | actataaaac | tttgaggact | ctcaagtaac | 30360 |
| tattcccttc | gacgaccact | cttagttata | aataaaattt | tccgaaaata | gtaagattaa | 30420 |
| gaagattttg | gaccaaagga | tttatgacta | atattttcga | tagtcttccg | caccaccgag | 30480 |
| tgcggacatt | aggggtcgtg | aacccctccg | gctccgcccc | cctagtgtct | cagtccctcta | 30540 |
| gctctggtag | gaccgattgt | gccacttttg | ggcagagatg | atttttatgt | tttttaaatcg | 30600 |
| gcccgcacca | ccgcccacgg | acatcagggg | cgatgagccc | tccgactccg | tcctcttacc | 30660 |
| gcacttgggc | cctccgcctc | gaacgtcact | cgtctctagt | acggtgacgt | gagggtcggac | 30720 |
| ccgctgtctc | actccgaggc | agagtctctt | ttttttttta | cgatagtctt | ctattaccaa | 30780 |
| tgttcatttc | tcccagaaag | gagctcgatg | tcataaaaagt | cacatgagac | cgaaaaaaaa | 30840 |
| aaaggaaact | ctgtctcaga | gcgagacagt | gggtccgacc | tcacgtcacc | gtgctagaac | 30900 |
| cgaatgagga | ggcggaggac | ccaagtttgt | taagaggacg | gagtcgaagg | gctcatcgac | 30960 |
| cctgatgtcc | gtgtgcgggtg | gtgcggggcg | agtaaaaaac | ataaaattat | ctctgcccc | 31020 |
| aagtggccca | acgggtccga | ccaccacttg | aggactcgag | tccgttaggc | gggcggagcc | 31080 |
| ggagggtttc | acgaccctac | tgtccacact | cggtgacacg | ggtcggtgag | accgataaaa | 31140 |
| aaaatttttt | cctcaattta | ctcaaacgaa | gacgtctact | ggtaaaagaa | agacgcacgc | 31200 |
| acaggaacaa | gagggagggt | cacacgcacg | ttgtgtacat | gtcctccaag | aactggaatc | 31260 |
| tattttaaac | attttaaggt | gtataaactt | gaccaaatag | gggtgtattc | cagaggaaag | 31320 |
| acgaaataaa | gtcggacgtc | tacacgggta | cagaaatcca | gtcaaagttc | aaaaacttta | 31380 |
| cccttattca | ctgtgacttc | cttctaaaa | tattttacttt | gtcaacacac | tggatcctta | 31440 |
| tattggaaca | cgagaatccc | ttcctgtaag | aatagaaaaa | aaaaaaaaaag | aattgccttc | 31500 |
| tggaaatact | atttgcgacc | tcattgtctgt | catgtgcgtc | gaccgtacgt | cccataacgt | 31560 |
| atatgaattg | tagaactctc | aggaagacga | aaaagaagta | gaagaaaaat | taggactata | 31620 |
| cgtttttacat | aaaacggtaa | ttttgttaac | atgataattt | tgtgacgtcg | tagaccgacc | 31680 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| cgcaccaccg | agtgtggaca | ttaggggtcgt | aaaaccctcc | gactccgccc | acctagtga | 31740 |
| ctccagtcct | caagttgtcg | tcggacagat | tgtaccactt | tgggggagag | atgattttta | 31800 |
| tgtttttaat | cgacccacac | caccgcccac | ggacattagg | gtcgaaaaac | cttctgactc | 31860 |
| cgtcctccta | gtggaccctc | cgtctccaac | gtcactcggg | tctagcacgg | tgacgtgagg | 31920 |
| tcggagccgc | tgtttccctc | tgagggagag | tttttgtttt | tttggtggtt | tgtgacgtcg | 31980 |
| tagactttac | tacgtttgtc | ctaataccga | tacctgacag | aattatcatt | accatcatta | 32040 |
| tcgtaattgt | tggtatcgtc | attatatctc | cttaattgaa | aataacttat | caattataca | 32100 |
| aattccgtgg | gacagtaaat | caggagtgtt | agtggggata | atagaagtaa | actgtctacc | 32160 |
| tctctgactc | cgagactttc | taagtaaatg | tttaggtttc | agtatgtcga | tctttcacca | 32220 |
| cttaaacgtg | ggtgtagact | aagacctcga | ccgtgagatt | tggtcacacg | acgaggtaga | 32280 |
| gaggatcaaa | catgaagagt | atcttagtgt | cctacaacca | cgtcctttcc | tgacgaatat | 32340 |
| agacccatgg | ggtggaaagt | aaaggaaagt | cagaactcta | gaaaaacttg | atcttcgtac | 32400 |
| gtaaatcttc | actataacta | tagtggtaga | ggacaaccat | ctatctagta | actcaccttt | 32460 |
| cttctcccaa | gttccctaag | aggggtggagt | cggagtatca | tcggtggtgc | gggttgatta | 32520 |
| aaaatataaa | agtcactctc | gccccaaaagt | agtacaaccg | gtccgaccag | agcttgagga | 32580 |
| ctggagtcca | ctagggtgacg | gaaccggagg | gtctcacgac | cctaataagg | gtctcatgta | 32640 |
| ctcgggtggcg | tggtccgggtc | ccgtttggga | aagttcgtcc | tcaagggtcat | atgactctct | 32700 |
| acctttacgt | taactacact | tcaggatcgt | catcgttggt | cgtctcgacc | ggaagaagg | 32760 |
| ccgaacctct | aggagacggg | ctacgagtag | aatggtctac | gtccgtctgg | agaagtaaa | 32820 |
| tctttccatc | tgtgactccc | tgtctctctg | gttccggtcg | tccttcagtc | agtgaatatca | 32880 |
| tttcccagg | ggtcagatag | tcaaagtact | tacatctcag | acacggacgg | aacatgtggg | 32940 |
| gagataaacg | tcactggtct | tattcatcat | cctgacattt | aaatacaata | ttacttaagt | 33000 |
| aatggtaata | aatttcaccg | tacaagtacg | aaaaaaaaaa | aaaaaactct | acctcagagc | 33060 |
| gagacagtgg | gtccaacctc | acgtcaccac | actagagtcg | agtgacgttg | gagggtggagg | 33120 |
| atccaagttc | actaagagaa | cggagtcgga | gggctcatcg | actctgatgt | ctgcacgggtg | 33180 |
| gtgtgggtcg | attaaaaaac | ataaaaaatca | tctctaccct | aaaacgggtat | aacgggtccg | 33240 |
| aacagagttt | gaggaccgga | gtccactagg | taaccggagc | cggagagttt | cacgacccta | 33300 |
| atgtccgcac | tcggtggcac | gggtctggga | cacgagaact | aaaggataga | aacatgaacc | 33360 |
| gaaaagagac | cggggtgacc | atgataacaa | tctccataga | gtaaacctcc | actttcctcc | 33420 |
| cctttattta | tgtcgtcaga | acagaaaatt | tatttatgtc | gtcagaatac | aatgagatga | 33480 |
| gactctagac | agaccggtaa | caaccgttaa | agtagactcg | tagtcgttaa | cgatcactgt | 33540 |
| cgggatgtag | acctgagtg | aaaggacaaa | ccataattac | aaagacctct | aatcttattc | 33600 |
| ccttctcttc | agcaaaatcg | taaaggcata | gagtcagggt | ttctccaaat | tttccgtgca | 33660 |
| cgtttactgt | tggggtgttt | tgttttagtt | gactcgtttt | tagttacgag | acgggttctc | 33720 |
| cctggtagaa | attcttcgaa | attcacttca | aatggaactt | tcaacattaa | tcttcgaagt | 33780 |
| ccttcgttca | cggaaatacc | gtcttactga | ctacaatgag | ggtcctagag | taccttaaca | 33840 |
| ttttaaaata | gagacaagac | acattcagtt | ggatttagtt | tgtctttata | atcacaaacc | 33900 |
| catgtagttt | tgtggaaatt | gaacaggaaa | gtaaaaccaa | acggaaaact | gtcctatatt | 33960 |
| agtgtctagg | taaattcgaa | cgtcttctca | gactgtcata | cttcagggtct | acacagggac | 34020 |
| tacgacgacc | tccgacgaca | ccgtgtttct | tttcgacgat | ttagatatcg | gttgggtccc | 34080 |
| tggtgtcatc | acccgttctc | actagacgta | caaaaaattg | gacgaaaagg | ggtatcgtgt | 34140 |
| ctggtattct | ttgttggtta | ccccggcccc | tgtcaccgag | tacggatatt | agggtcgtga | 34200 |
| aacctcccg | ctccgtccgt | ctagtggact | ccagtcctca | aactatgggtc | ggaccgggtg | 34260 |
| taccacttta | ggacagagat | ggtttttatg | ttttttttta | tcgacccgta | ccaccacgtg | 34320 |
| tggatatcag | agtcgatgag | ccctccgact | ccgtcctctt | aacgaacttg | ggtccttcat | 34380 |
| ctccgacgtc | actcattcgt | agtgcgggtga | catgagggtcg | gacccgttgt | ctcgttctga | 34440 |
| gacagagttt | tcgttttttt | tttttttttt | ttctttcttt | ctttttcttt | tgttggtttac | 34500 |

<210> 3

<211> 1735

<212> DNA

<213> Homo Sapiens

<400> 3

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| gagacagtga | gtgcgcgccc | tgagtcgcag | gccgaggaga | cagtgagtgc | gcgccctgag | 60 |
| tcgcaggccg | aggagacatg | gctgcacttc | gtgacgctga | gatacagaag | gacgtgcaga | 120 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|------------|------|
| cctactacgg | gcaggtgctg | aagagatcgg | cagacctcca | gaccaacggc | tgtgtcacca | 180 |
| cagccaggcc | ggcccccaag | cacatccggg | aagccttgca | aaatgtacac | gaagaagtag | 240 |
| ccctaagata | ttatggctgt | ggctctggga | tccttgagca | tctagaaaac | tgctggattt | 300 |
| tggatctggg | tagtggaagt | ggcagagatt | gctatgtact | tagccagctg | gttggtgaaa | 360 |
| aaggacacgt | gactggaata | gacatgacca | aaggccagggt | ggaagtggct | gaaaagtatc | 420 |
| ttgactatca | catggaaaaa | tatggcttcc | aggcatctaa | tgtgactttt | ttccatggca | 480 |
| acattgagaa | gttggcagag | gctggaatca | agaatgagag | ccatgatatt | gttgtatcaa | 540 |
| actgtgttat | taaccttgtg | cctgataaac | aacaagtgtc | tcaggaggca | tatcgggtgc | 600 |
| tgaagcatgg | tggggagtta | tatttcagtg | acgtctatac | gagccttgaa | ctgccagaag | 660 |
| aaatcaggac | acacaaagtt | ttatgggggtg | agtgtctggg | tgggtgcttta | tactggaagg | 720 |
| aacttgctgt | ccttgctcaa | aaaattgggt | tctgccctcc | acgtttggtc | actgccaatc | 780 |
| tcattacaat | tcaaaacaag | gaactggaaa | gagttatcgg | tgactgtcgt | tttgtttctg | 840 |
| caacatttcg | cctcttcaaa | cactctaaga | caggaccaac | caagagatgc | caagttattt | 900 |
| acaatggagg | aattacagga | catgaaaaag | aactaatggt | tgatgccaat | tttacattta | 960 |
| aggaagggtga | aattgttgaa | gtggatgaag | aaacagcagc | tatcttgaag | aattcaagat | 1020 |
| ttgctcaaga | ttttctgata | agaccaattg | gagagaagtt | gccaacatct | ggaggctgtt | 1080 |
| ctgcttttga | gttaaaggat | ataatcacag | atccatttaa | gcttgcagaa | gagtctgaca | 1140 |
| gtatgaagtc | cagatgtgtc | cctgatgtct | ctggaggctg | ctgtggcaca | aagaaaagct | 1200 |
| gctaaatcta | tagccaacca | ggggaccaca | gtagtgggca | agagtgatct | gcatgttttt | 1260 |
| taacctgctt | ttccccatag | cacagaccat | aagaaacaac | aaatgagcca | ctgcgcccgg | 1320 |
| ccataaatga | attattttta | agaggcattg | attaaagatt | cacagcaaata | cactagttaa | 1380 |
| gcagattttt | tttctatttc | ctacttcaaa | gttctgggtg | cacatagtgg | tcagaaatgg | 1440 |
| aacagagaag | ctgtcttaag | ccttgttcaa | gaagcaggaa | aggcatcaga | agaagtaaca | 1500 |
| gttggcagag | ggctctcagga | aaaacatctt | ccttctgata | ttttgcatag | caccttttgg | 1560 |
| aattttcatc | atgtttgctt | attaaacaaa | gctcctactg | ccatcatact | aatcatgcaa | 1620 |
| aaagattgcc | aaatcatggt | tggtaggagg | acttttgagg | tagcttttga | acaaatgttt | 1680 |
| ttttcttttt | tctttttttt | tgcaataaag | aaaacaaatt | aatcataaaa | aaaaa | 1735 |

<210> 4

<211> 1735

<212> DNA

<213> Homo Sapiens

<400> 4

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| ctctgtcact | cacgcgcggg | actcagcgtc | cggctcctct | gtcactcacg | cgcggggactc | 60 |
| agcgtccggc | tcctctgtac | cgacgtgaag | cactgcgact | ctatgtcttc | ctgcacgtct | 120 |
| ggatgatgcc | cgtccacgac | ttctctagcc | gtctggagggt | ctggttgccg | acacagtgggt | 180 |
| gtcgggtccg | ccaggggttc | gtgtaggccc | ttcggaacgt | tttacatgtg | cttcttcatc | 240 |
| gggattctat | aataccgaca | ccagaccact | agggactcgt | agatcttttg | acgacctaaa | 300 |
| acctagaccc | atcaccttca | ccgtctctaa | cgatacatga | atcggtcgac | caaccacttt | 360 |
| ttctctgtga | ctgaccttat | ctgtactgggt | ttccgggtcca | ccttcaccga | cttttcatag | 420 |
| aactgatagt | gtaccttttt | ataccgaagg | tcctgtagatt | acactgaaaa | aagggtaccgt | 480 |
| tgtaaactct | caaccgtctc | cgaccttagt | tcttactctc | ggtagctataa | caacatagtt | 540 |
| tgacacaata | attggaacac | ggactatattg | ttgttcacga | agtcctccgt | atagcccacg | 600 |
| acttcgtacc | acccctcaat | ataaagtcac | tgcagatatg | ctcggaactt | gacggtcttc | 660 |
| tttagtcctg | tgtgttttcaa | aataccccac | tcacagaccc | accacgaaat | atgaccttcc | 720 |
| ttgaacgaca | ggaacgagtt | ttttaaccca | agacgggagg | tgcaaaccag | tgacggttag | 780 |
| agtaatgtta | agttttgttc | cttgaccttt | ctcaatagcc | actgacagca | aaacaaagac | 840 |
| gttgtaaagc | ggagaagttt | gtgagattct | gtcctgggtg | gttctctacg | gttcaataaa | 900 |
| tgttacctcc | ttaatgtcct | gtactttttt | ttgattacaa | actacgggta | aaatgtaaat | 960 |
| tccttccact | ttaacaactt | cacctacttc | tttgtcgtcg | atagaacttc | ttaagttcta | 1020 |
| aacgagttct | aaaagactag | tctgggttaac | ctctcttcaa | cggttgtaga | cctccgacaa | 1080 |
| gacgaaacct | caatttccta | tattagtgtc | taggttaaatt | cgaacgtctt | ctcagactgt | 1140 |
| catacttcag | gtctacacag | ggactacgac | gacctccgac | gacaccgtgt | ttcttttcga | 1200 |
| cgatttagat | atcgggttgg | cccctgggtg | catcacccgt | tctcactaga | cgtacaaaaa | 1260 |
| attggacgaa | aaggggtatc | gtgtctggta | ttctttgttg | tttactcggg | gacgcggggc | 1320 |
| ggtatttact | taataaaaaa | tctccgtaac | taattttctaa | gtgtcgttta | gtgatcaatt | 1380 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| cgtctaaaaa | aaagataaag | gatgaagttt | caagaccacg | gtgtatcacc | agtctttacc | 1440 |
| ttgtctcttc | gacagaattc | ggaacaagtt | cttcgtcctt | tccgtagtct | tcttcattgt | 1500 |
| caaccgtctc | ccagagtcct | ttttgtagaa | ggaagactag | aaaacgtatc | gtggaaaacc | 1560 |
| ttaaaagtag | tacaaacgaa | taattttgtt | cgaggatgac | ggtagtatga | ttagtacggt | 1620 |
| tttctaacgg | tttagtacaa | accatcctcc | tgaaaactcc | atcgaaaact | tgtttacaaa | 1680 |
| aaaagaaaaa | agaaaaaaa | acgttatctt | ttttgtttaa | ttagtatctt | ttttt | 1735 |

<210> 5

<211> 375

<212> PRT

<213> Homo Sapiens

<400> 5

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Leu | Arg | Asp | Ala | Glu | Ile | Gln | Lys | Asp | Val | Gln | Thr | Tyr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Gly | Gln | Val | Leu | Lys | Arg | Ser | Ala | Asp | Leu | Gln | Thr | Asn | Gly | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Thr | Thr | Ala | Arg | Pro | Val | Pro | Lys | His | Ile | Arg | Glu | Ala | Leu | Gln |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Asn | Val | His | Glu | Glu | Val | Ala | Leu | Arg | Tyr | Tyr | Gly | Cys | Gly | Leu | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Pro | Glu | His | Leu | Glu | Asn | Cys | Trp | Ile | Leu | Asp | Leu | Gly | Ser | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Gly | Arg | Asp | Cys | Tyr | Val | Leu | Ser | Gln | Leu | Val | Gly | Glu | Lys | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| His | Val | Thr | Gly | Ile | Asp | Met | Thr | Lys | Gly | Gln | Val | Glu | Val | Ala | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Tyr | Leu | Asp | Tyr | His | Met | Glu | Lys | Tyr | Gly | Phe | Gln | Ala | Ser | Asn |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | Thr | Phe | Ile | His | Gly | Tyr | Ile | Glu | Lys | Leu | Gly | Glu | Ala | Gly | Ile |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Lys | Asn | Glu | Ser | His | Asp | Ile | Val | Val | Ser | Asn | Cys | Val | Ile | Asn | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Val | Pro | Asp | Lys | Gln | Gln | Val | Leu | Gln | Glu | Ala | Tyr | Arg | Val | Leu | Lys |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| His | Gly | Gly | Glu | Leu | Tyr | Phe | Ser | Asp | Val | Tyr | Thr | Ser | Leu | Glu | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Glu | Glu | Ile | Arg | Thr | His | Lys | Val | Leu | Trp | Gly | Glu | Cys | Leu | Gly |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Ala | Leu | Tyr | Trp | Lys | Glu | Leu | Ala | Val | Leu | Ala | Gln | Lys | Ile | Gly |
| | | 210 | | | | 215 | | | | | 220 | | | | |
| Phe | Cys | Pro | Pro | Arg | Leu | Val | Thr | Ala | Asn | Leu | Ile | Thr | Ile | Gln | Asn |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Lys | Glu | Leu | Glu | Arg | Val | Ile | Gly | Asp | Cys | Arg | Phe | Val | Ser | Ala | Thr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Phe | Arg | Leu | Phe | Lys | His | Ser | Lys | Thr | Gly | Pro | Thr | Lys | Arg | Cys | Gln |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Val | Ile | Tyr | Asn | Gly | Gly | Ile | Thr | Gly | His | Glu | Lys | Glu | Leu | Met | Phe |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Asp | Ala | Asn | Phe | Thr | Phe | Lys | Glu | Gly | Glu | Ile | Val | Glu | Val | Asp | Glu |
| | | 290 | | | | 295 | | | | | 300 | | | | |
| Glu | Thr | Ala | Ala | Ile | Leu | Lys | Asn | Ser | Arg | Phe | Ala | Gln | Asp | Phe | Leu |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ile | Arg | Pro | Ile | Gly | Glu | Lys | Leu | Pro | Thr | Ser | Gly | Gly | Cys | Ser | Ala |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Glu | Leu | Lys | Asp | Ile | Ile | Thr | Asp | Pro | Phe | Lys | Leu | Ala | Glu | Glu |
| | | | 340 | | | | | 345 | | | | | | 350 | |

Ser Asp Ser Met Lys Ser Arg Cys Val Pro Asp Ala Ala Gly Gly Cys
 355 360 365
 Cys Gly Thr Lys Lys Ser Cys
 370 375

<210> 6
 <211> 40
 <212> DNA
 <213> Homo Sapiens

<400> 6
 gtcctgagtc gcaggccgag gagacagtga gtgcgcgccc 40

<210> 7
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 7
 tgtaaaacga cggccagt 18

<210> 8
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 8
 caggaaacag ctatgacc 18

<210> 9
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 9
 tgtaaaacga cggccagttc tgcaagatga agtgacaata c 41

<210> 10
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 10
 caggaaacag ctatgacctt gttcgctcca ctgcgatt 38

<210> 11
 <211> 43
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 11
 tgtaaaacga cggccagtag gagatttatc cgtgaaaatc gca 43

 <210> 12
 <211> 41
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 12
 caggaaacag ctatgaccgg aggcgctcgc gttcccgct t 41

 <210> 13
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 13
 tgtaaaacga cggccagtag ctgtgtctcg agacctttgt 40

 <210> 14
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 14
 caggaaacag ctatgaccgt taattcccta gtgacctgca tcattat 47

 <210> 15
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 15
 tgtaaaacga cggccagttt attttagatg gcttatgaag tottagt 47

 <210> 16
 <211> 44

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 16
 caggaaacag ctatgacctt attgttcaag ttatcagttt ccaa 44

 <210> 17
 <211> 43
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 17
 tgtaaaacga cggccagtag cttctagtta gcaatgctca ttt 43

 <210> 18
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 18
 caggaaacag ctatgaccgc tatagtcata acagtaagaa tataga 46

 <210> 19
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 19
 tgtaaaacga cggccagttg cctgatgtta ttttctgcac attcaaactt 50

 <210> 20
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 20
 caggaaacag ctatgaccat tcagtgcaca ctgtcaccac ggattta 47

 <210> 21
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 21
 tgtaaaacga cggccagtcc ttggcacttg actattgatt gtaa 44

<210> 22
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 22
 caggaaacag ctatgaccat cctggctatt agcagaaagg agtt 44

<210> 23
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 23
 tgtaaaacga cggccagtgt ggcgtactgc atacatgaat attat 45

<210> 24
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 24
 caggaaacag ctatgacccc agataacaga aagtatccct caat 44

<210> 25
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 25
 tgtaaaacga cggccagttg acagacagca gggactatta taa 43

<210> 26
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Primer

<400> 26
caggaaacag ctatgaccag aaaaatggga ggcaatgcaa agtcaa 46

<210> 27
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 27
tgtaaaacga cggccagtca gtgtgtaagg attagtgtgtg gt 42

<210> 28
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 28
caggaaacag ctatgaccgt ctgggtgaca gagagagact cca 43

<210> 29
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 29
tgtaaaacga cggccagtga gaagtcgttt tagcatttcc gtat 44

<210> 30
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 30
caggaaacag ctatgaccga tttgttggtt cttatggtct gtgctat 47

<210> 31
<211> 25
<212> PRT
<213> Homo Sapiens

<400> 31
Arg Asp Ala Glu Ile Gln Lys Asp Val Gln Thr Tyr Tyr Gly Gln Val
1 5 10 15

Leu Lys Arg Ser Ala Asp Leu Gln Cys
20 25

<210> 32
<211> 20
<212> PRT
<213> Homo Sapiens

<400> 32
Asp Ile Ile Thr Asp Pro Phe Lys Leu Ala Glu Glu Ser Asp Ser Met
1 5 10 15
Lys Ser Arg Cys
20

<210> 33
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 33
aagaagggta ccacgagatt tatccgtgaa aatcgca 37

<210> 34
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 34
aagaagctcg agaggggaagg ggctgggggc t 31

<210> 35
<211> 36
<212> DNA
<213> Homo Sapiens

<400> 35
gtcgcaggcc gaggagacag tgagtgcgcg ccctga 36

<210> 36
<211> 35
<212> DNA
<213> Homo Sapiens

<400> 36
gtcgcaggcc gaggagacag tgagtgcgcg ccctg 35